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THE

AMERICAN PRACTITIONER:

A MONTHLY JOURNAL OF

MEDICINE AND SURGERY.

EDITED BY

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> Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.—RUSKIN.

Original Communications.

ON THE AGENCY OF THE MIND IN ETIOLOGY, PROPHYLAXIS, AND THERAPEUTICS.

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The reciprocal influences of mind and body offer a wide range for investigation, and certain points of inquiry relating thereto may be said to be of paramount importance as compared with other branches of scientific research. These points relate especially to the influence of body on mind. Here are questions which concern not alone mental pathology, but morality, jurisprudence, social life, the progress of civilization and human happiness perhaps, in a future life as well as in our present existence. Questions relating to the influence of the mind on the body are more exclusively medical in their character, and I shall confine myself to these in the following remarks.

With cases illustrating a morbid exaggeration of subjective symptoms, and a conviction of the existence of imaginary diseases, all practitioners are familiar. These cases are nosologically disposed of by calling them cases of hysteria, melancholia, pathophobia, and hypochondriasis. I am tempted to introduce a brief account of two striking examples which have recently fallen under my observation.

A married lady, of education and superior intellectual endowments, nearly forty years of age, in easy circumstances, and without children, unhappily had been led to concentrate her attention on her bodily condition. After a series of fancied ailments, for which she had kept the bed for over three years, she conceived the idea that from a peculiar susceptibility of the brain she was unable to bear the stimulus of light. During several months she insisted that her room should be darkened; and the darkness was made as complete as possible by black curtains covering the windows and doors, and by surrounding her bed with screens, to absorb the few rays of light which entered when a door was opened. In the mean time repeated examinations of the eyes by an eminent oculist failed to discover any evidence of disease. After much perseverance on the part of physicians and friends, she was at length persuaded to bear a little exercise of vision. Very gradually the darkness was diminished, and she believed herself finally cured of this malady, without admitting that she had suffered from a delusion. She was undoubtedly sincere in her belief in the reality of the fancied malady, and it would have been worse than useless to have attempted to convince her to the contrary. This patient believed that to change her position in bed by her own efforts would be fraught with evil consequences, and for this purpose the constant attendance of a nurse was required; yet it is certain that there was no lack of muscular strength. Her aspect was healthy; there was no impairment of nutrition; she ate an abundance of food, and careful interrogations of the various organs showed no evidences of any definite disease.

A married lady, wealthy, and in a high social position, about fifty years of age, consulted me for loss of the faculty of speech. She communicated respecting her malady by means of a slate and pencil, which she carried with her for that purpose. She declared her inability to speak even in a whisper. Our conversation was carried on partly in writing and partly by signs which her husband interpreted. A thorough examination of the chest was completely negative, and there was no paralysis of the tongue or lips. I refrained from expressing distrust of her inability to speak, even in a whispered voice, and after a prolonged interview I dismissed her with a prescription. Some time afterward she called again to tell me that she could not take the remedy which I had prescribed, and that her malady continued. That she honestly believed herself unable to speak I did not doubt. She is a lady of unusual intelligence, and in the second interview the conversation after a time became directed to topics in which she was much interested. Finding at length that the slate and pencil, together with her signs, which were with difficulty interpreted, failed to convey her ideas satisfactorily, she began to speak, and continued the conversation for half an hour in a natural tone of voice. I made no comment thereon, and nothing was said by her respecting the sudden recovery of speech. This was the last consultation. She has not again called upon me.

It would be easy to multiply cases illustrative of delusions respecting health. The patience and temper of physicians are sorely tried by such cases. Reasoning with the patient is without much avail. Positive assurances by the physician are often useless, or their efficacy is but transient. Ridicule only ruptures professional relations. There is ample scope for tact and perseverance in the management; and such cases claim more consideration and persistency of effort in the way of judicious treatment than they are apt to receive.

The various delusions respecting imaginary diseases, together with indefinite apprehensions concerning health, and undue attention to the functions of the body, undoubtedly enter more or less largely into etiology. There is perhaps little ground for the opinion which has been held that devotion to the study of particular affections predisposes to their development; but it is certain that constant watching of particular functions is almost sure to lead to disorder. If the attention be habitually concentrated on the digestive organs, indigestion is an almost inevitable consequence. That unfortunate being, a confirmed dyspeptic, may often indulge his appetite to the fullest extent with impunity, provided the mind be agreeably diverted for some hours afterward. The concentration of the mind on the digestive processes is, in fact, often the chief cause of chronic dyspeptic ailments. Functional disorder of the heart is frequently kept up by a conviction of the existence of organic disease, and of liability to sudden death. Frequent micturition and polyuria are produced by apprehensions relating to the urine; and temporary impotency is a well-known effect of imagined sexual incompetency. The depressing influence upon the system of fixed delusions and prolonged indefinite apprehensions is by no means inconsiderable. If diseases be not thereby induced, their production is favored by the agency of the mind, which acts either as an auxiliary cause, or by rendering the system more susceptible to various morbific influences.

The morbid mental conditions to which I have referred, as standing in a causative relation to physical maladies, are themselves often dependent on causes relating to the mind. What causes originating in the mind induce these morbid mental conditions? Observation shows that the exercise simply of the intellectual faculties rarely gives rise to mental and thereby to physical disorder. They who are devoted to pursuits involving the active employment of the intellect are not in consequence prone to diseases of the mind. Madness is rarely, if ever, an effect of "much learning," as implied in the exclamation of Festus to Saint Paul. The maladies, mental and physical, which are incident to intellectual pursuits, as a rule, do not depend directly on the latter, but they arise from sedentary habits, or other associated violations of hygienic laws. Observation will, I believe, bear me out in these assertions. "Wear and tear," nervous asthenia, morbid apprehensions concerning health, melancholia, hypochondriasis, and insanity, together with the ills of the body resulting from these mental conditions, are the results of the emotional rather than the intellectual activity of the mind.

Among those whose work may be distinguished as *braincraft*, they who suffer from the mental causes of disease are not the close students, the industrious authors, and the laborious lawyers, clergymen, and physicians, in so large a proportion as men of business, speculators, and politicians. It is not the amount of intellectual work so much as the constant tension from anxiety and suspense, the alternations of undue exultation and despondency occasioned by the so-called caprices of fortune, and persistent over-excitement, which constitute morbific agencies of mental origin.

I will venture another statement, which, as I believe, observation will verify—namely, the calamities of life which, by way of distinction, we may call providential, are far less likely to prove morbific than emotional disturbances incident to a disordered imagination, irregularities of life, and unrestricted passions. By the term providential calamities I mean those which are in a great measure beyond human control, and therefore appear to occur more especially in the order of Providence; such as the death of relatives and friends, the loss of property by events which could not be foreseen nor provided against, and deformities or maiming by disease or injuries. Both mind and body tolerate such calamities much better than those for which the responsibility rests with man rather than with God.

Physicians, sanitarians, and moralists have of late had much to say respecting the evils of over-exertion of the intellect and of mental strain; and there has been much occasion for speaking of these sources of injury to mind and body in our country, especially during the past few years. But there is another aspect of the etiology of morbid mental conditions concerning which much less has been said—namely, deficient exercise of the intellectual powers, or insufficient activity of the mind, as a source of morbific agencies. Observation will, I think, show that evils of both body and mind originate quite as often in a want of the proper action of the intellectual and moral faculties as in their over-use or excitation. Occupations which employ the intellect are likely to prevent inordinate attention to the bodily functions, and herein their influence is prophylactic. Abundant illustrations of the evils of deficient activity of the mind are to be found among those who, under the delusive expectation of enjoying leisure and rest, have relinquished pursuits which involved an habitual exercise of the mental faculties. Let me cite two examples from among those which have come under my observation.

A highly intelligent, energetic, and able merchant acquired a handsome competency at about the age of thirty-five. He then began to be apprehensive concerning his health. Fancying successively the existence of different diseases, he spent most of his time in watching for symptoms and in the study of medical works. At one time the kidneys were the organs under surveillance, and he became an expert in the chemical and microscopical examinations of the urine, in order to investigate daily this excretion in his own case. For several years he exemplified the varied phases of pathophobia. At length pecuniary reverses came to his relief, and it became necessary for him to engage anew in business. He did so, and from that time, for a period now of five or six years, he has been exempt from the delusions which had previously rendered life a burden to him.

An astute lawyer, aged about forty, commencing his professional life without means, has been eminently successful as regards the acquisition of wealth. Some disorder of the digestive system led him to become apprehensive on the score of health. This resulted in confirmed pathophobia. He now devotes most of his time to the study of his bodily functions and to reading medical works. He requires elaborate analyses of the urine and fæces, and is anxious to become a microscopist, in order that he may himself examine his blood. Positive assurances that there is no evidence of disease of any of the organs of the body are unavailing. When told that it is bad policy for him to undertake to investigate his organism, he admits it, but declares that the desire to do so is irresistible. Here is one among many instances in which the absence of wealth as regards the *mens sana in corpore sano* would be a positive blessing. It is probable that the employment of the mind to gain a livelihood and a competence would have prevented him from falling into his present truly pitiable mental condition.

It is a well-known fact that habits of mental activity can not be given up without risk of impairing the healthy condition of mind and body. Of the members of the professions and men of business who retire to enjoy the fruits of their labors, a large proportion suffer from ennui and depression of spirits. Many become affected with confirmed melancholia and hypochondriasis, and in not a few cases insanity is the result. These morbid mental conditions, acting upon the organism through the nervous system, lower the vital powers, interfere with the processes preparatory to nutrition, and occasion various functional disturbances. Hence they promote the action of the various causes of disease, they impair the ability to resist disease, and they consequently tend to shorten life. But habits of apparent mental activity, if the different faculties be not adequately engaged, will not protect against morbid conditions of the mind. Let me preface some remarks relating to this statement by a case.

A patient, who has hardly reached the middle period of life, by his industry, integrity, and remarkable financial ability has already acquired a large fortune. To this end his energies have been directed, and he has been eminently successful. Now, it may be assumed that any great object of human effort, when accomplished, fails to afford the satisfaction which had been anticipated. The love of riches with this patient is not a ruling passion; yet, from the force of habit, he continues to give his attention to business, and doubtless is constantly adding to his wealth. He pursues a prudent course in his business transactions, and he has become so familiar with his method of money-making that it now requires no great amount of mental effort. His aspirations for success are in a great measure satisfied; but while in the eyes of others he holds a very enviable position as regards worldly prosperity, and while, in addition to wealth, he has everything as regards social and domestic relations to render him happy, he declares, in professional confidence, that he is one of the most wretched of men. He finds himself unable to derive enjoyment from the blessings which Providence has showered upon him. He is a martyr to melancholia and hypochondriasis. His morbid mental state is not dependent on any disease of body. The difficulty is, his mental powers and capacities are not fully and appropriately occupied. The case is a type of a class of unfortunates who are much to be pitied.

The practical truth which such cases teach is that the proper exercise of all the faculties of the mind, the sentiments as well as those belonging to the intellect, is the great requisite for mental health, and consequently for happiness. The habitual activity of those attributes of mind which enter into true philanthropy and practical benevolence would often prove a sure means of preventing and curing morbid mental conditions which embitter life. It is safe to assert, without knowledge of the fact, that George Peabody was not a victim of melancholia or hypochondriasis; but it is by no means necessary to possess the means for munificent generosity to secure the exercise of sentiments underlying the beneficent actions which render the name of Peabody illustrious. They who are not affluent, and even the poorest, may enjoy the sanitary influence (to speak of nothing else) of the exercise of these sentiments. It is one of the traditional sayings of the eccentric Abernethy, that being consulted by a rich patient suffering from mental inactivity, and the evils of luxurious indulgence of the appetite, he advised him to live on a shilling a day, and to earn the shilling. The advice embraces an important practical truth—namely, the need in such cases, in addition to temperance, of mental occupation, with an adequate purpose. Of course such advice is superfluous as regards the probability of its being literally followed; but the practical truth which it embraces is not broad enough to meet all cases. It points to the importance of the intellectual faculties only, ignoring those of the moral nature. Some one has said, in substance, that to do something each day which will render others happy is a preventive against ennui and misanthropy. If some of our patients would adopt this as a rule of conduct it would do far more toward restoring mental and physical health than any drugs which we can prescribe. I have sometimes ventured to propose this rule as a therapeutic measure, but I confess that as yet I have not in any instance secured a fair trial of it.

I trust that the tenor of the foregoing remarks will not expose me to the charge of having wandered without the proper boundaries of practical medicine. Mental disorders not amounting to insanity, it seems to me, are not sufficiently considered by medical writers, and their importance is apt to be under-estimated by practitioners of medicine. These disorders not infrequently precede and lead to insanity; and there are grounds for the belief that timely attention to the former on the part of the physician would often prevent the latter.

It so happened, a few years ago, that I was consulted by the friends of a prominent citizen, holding an office of much responsibility, respecting a state of great mental depression, which it was feared denoted danger of insanity. From the statements which were made to me I expressed a decided opinion that this danger was imminent, and that medical advice should be obtained without any delay. This was in the evening, and it was decided to defer any action until the following day. Early the next morning the patient committed suicide. I can not but think that had he been seen on the evening before his death by an intelligent and judicious physician his valuable life would have been spared. It is true of mental as of many other diseases, that they are easier prevented than cured. In diminishing the prevalence of insanity more is to be expected from prophylaxis than from therapeutics.

The treatment of cases of insanity is very properly confided, for the most part, to those who give exclusive or special attention to this branch of medical practice; but it is to be considered that they who treat cases of insanity do not, as a rule, see patients until after they have become insane. The treatment of mental maladies which precede and lead to insanity must devolve upon the general practitioner. Hence the importance of according to affections of the mind a larger share in medical literature than has hitherto been done. It is worthy of note that some of our medical colleges have lately assigned to this class of affections a distinct place in the curriculum of instruction. It should also occupy a fair proportion of space in systematic treatises on the principles and practice of medicine; and a work devoted to morbid mental conditions originating from causes pertaining to mind and body, without embracing insanity, would prove, if full justice were done to the subject, most interesting and useful.

In conclusion, I shall offer a few thoughts on the prophylactic and therapeutic agency of the mind with reference to diseases affecting the physical organism.

Are diseases ever prevented by the mental state? It is a common belief with physicians and others that there is a measure of prevention against certain diseases in the absence of fear of them; and, *per contra*, that fear of a disease sometimes enters largely into its causation. It is not easy to demonstrate the correctness of this belief, but there is reason to consider it as well founded. During the prevalence of epidemics it is a matter of observation that the timid and pusillanimous are apt to be attacked, whereas they who are courageous and more thoughtful of others than apprehensive for themselves are likely to be unharmed. There is nothing in this very mysterious or unintelligible. The depressing influence of fear lessens the power of the organism to resist the action of morbific agents. On the other hand, the vital functions go on regularly and actively when the mind is undisturbed, and the attention diverted from self; hence it is more difficult for the causes of disease to take root in the system.

I think it may be assumed that the exercise of pure and lofty sentiments is conducive to the health and vigor of body as well as mind. In so far then as bodily health and vigor afford protection against disease, the exercise of these sentiments is prophylactic. If I mistake not, the facts of history show that they who, actuated by motives springing from generosity and nobleness of soul, engaged in undertakings requiring long-continued exertions, physical or mental, or both, with perhaps severe hardships and self-denials, are apt to be spared from disease and death until the objects are accomplished. Striking instances of this kind appear to exemplify a direct interposition of Providence. The ends of

Providence, however, are effected by means; and it is reasonable to suppose that in these instances there is an agency pertaining to the mind which is conservative as regards the prevention of disease. George Peabody is reported to have said, a few days before his death, "I have prayed daily to God to spare my life to carry out the work I was endeavoring in my feeble way to accomplish, and he has done it." Is it inconsistent with a belief in the efficacy of prayer to conjecture that the mental condition indicated by this statement may have been positively instrumental in prolonging the life of this illustrious philanthropist? If there be truth in the idea that the activity of the higher sentiments involves a prophylactic agency, health and length of days are to be added to other and worthier inducements for the cultivation of these sentiments.

That mental conditions are more or less operative either in promoting, or otherwise, recovery from diseases is a truth which all medical observers must admit. While on the one hand a feeling of discouragement and hopelessness as regards recovery are obstacles not infrequently in the way of cure, on the other hand hope and confidence in the means employed for recovery are often powerful auxiliaries in the successful treatment of diseases. The state of the mind of a patient enters in many cases more or less largely into the prognosis. Of course to develop and maintain this, hope and confidence should enter, within proper limits, into the aims of the physician. The difference among practitioners as regards success in the treatment of diseases arises in no small degree from a difference, first, in an appreciation of the importance of exciting a proper measure of influence on the minds of patients in the way of encouragement; and second, in the knowledge and tact required to exert such an influence. All of us know physicians who are good diagnosticians, and whose judgment in the employment of remedies is excellent, but who are comparatively unsuccessful, both in treating diseases and obtaining practice, chiefly in consequence of a lack of this knowledge and tact. The mental temperament of the practitioner has much to do in this matter. Some physicians are prone to look always on the dark side of cases. They are constantly thinking of the unfavorable events which may happen, and they are unable to conceal their apprehensions from patients. They look upon every case in its most serious aspect, and their countenances at the bedside, if not their words, express gloomy forebodings. No amount of skill in diagnosis and the use of drugs will compensate fully for the baneful effect of this temperament. It were better had those who are thus constituted chosen some other vocation than the practice of medicine. Other physicians are distinguished for always taking the most hopeful view of cases. They look ever on the bright side. Their looks infuse hope, and their words are full of encouragement. The effect is often more powerful than medication. There is, of course, an injudicious extreme in the latter direction, and between this extreme and the opposite there is a golden mean; but if there must be a deviation from this mean, it is desirable that it should incline to hopefulness rather than despondency.

We meet sometimes with cases in which recovery from disease seems fairly attributable, in a great measure, to a resolute determination on the part of the patient to recover. An unfavorable prognosis is communicated to a patient. He declares that he will not die, and he gets well, when, according to prognostics, which are not thereby invalidated, he ought to have died. Examples of this kind have doubtless fallen under the observation of my readers. It has fallen to my lot to observe a large number of cases of tuberculous disease of the lungs; and I have been struck with the fact that in the comparatively few which have ended in recovery, the patients have generally been persons of a strong will, who, appreciating fully the disease, have resolved, if possible, to overcome it. I can not but think that the proportion of cases ending in recovery would be larger than it is were it not that the disease carries with it so often either a delusive expectation of recovery without exertion, or a passive acquiescence in a fatal termination.

The management in many cases of disease embraces measures not to effect a cure, but to secure as fully, and for as long a period as possible, tolerance of the disease. To prolong life, and to render as comfortable as may be life as long as it lasts, are the grand object of management when diseases exist which are incurable, and which, sooner or later, will end fatally. Now, mental conditions have much to do toward the accomplishment of these objects. Occupations which engage the mind sufficiently to prevent undue attention to symptoms, over-anxiety, and apprehensions are often of great utility. Knowledge of the existence of an incurable disease is sometimes extremely unfortunate for the welfare of the patient. I am convinced that the duration of life is sometimes shortened, and comfort during life lessened, by this knowledge.

It is perhaps a common belief that the existence of organic diseases of the heart should be known as early as possible, in order to take advantage of precautions relating to physical exercise and mental excitement, which are generally deemed of great importance. But even these diseases, as it seems to me, are as a rule better tolerated when, from either ignorance of their existence or an imperfect appreciation of their gravity, patients continue to pursue avocations which may involve considerable muscular exertion as well as mental activity. The explanation is simple. Tolerance of these as well as other incurable affections is promoted by keeping the general health and vigor at the highest practicable point. Ample alimentation, active digestion, and good nutrition are means essential for this end. Employment of the faculties of mind and body in the pursuits to which one is accustomed conduce to the end by promoting these means. Certain it is that not infrequently persons with incurable diseases, when they become fully awake to the fact, and make a radical change in their habits of life, begin to show a want of the tolerance which had previously existed, and the resistance diminishes rapidly from that moment. If this be a correct statement, it embodies a truth of great importance in its practical bearing, and it seems to me one which physicians do not always sufficiently consider. It is remarkable how much work has been done, and how much hardship has been endured, by men engaged in large undertakings, with either heart, lungs, kidneys, or other important organs greatly damaged by incurable disease! This valuable lesson is to be learned from these examples; that diseases which can not be cured are best and longest endured when all hygienic influences relating to mind as well as body combine to develop and maintain to the utmost extent the vigor of the organism.

NEW YORK.

A CASE OF ELECTROTHERAPY.

BY J. W. HOLLAND, M. D.,
Professor of Chemistry in the University of Louisville.

Mr. Robinson, aged forty-one, a medical student, was fifteen years ago, when convalescent from remittent fever, stricken with partial deafness in both ears, the loss of sense in the right ear being more pronounced than that in the left. During the period which has elapsed since there has been but little amelioration of his hearing. Close examination showed no impairment of healthy structure in the parts accessible to inspection, nor did the history incline one to the opinion that organic mischief had been either the cause or an incident in the course of his affection. It was plainly a case of "nervous deafness," probably due to a sudden but enduring apathy of the auditory nerve.

The feeblest current from a volta faradaic coil that was perceptible to the hand was employed upon both ears successively. The auditory canal was filled with water, and the positive electrode, in the shape of a metallic conductor, insulated—save at the end, where it terminated in a silver ball about the size of a barleycorn—was inserted nearly to the tympanum. The circuit was completed by the negative sponge electrode being placed upon the superior cervical ganglion of the same or opposite side. A sitting of five minutes' length resulted in the immediate and considerable improvement of both ears. On reaching the street, the hearing was so much more acute than when the patient entered the office as to impel him to remark that "it was the revelation of a new world." Where before the tick of an uncommonly noisy watch could not be heard even when pressed hard upon the ear and mastoid process, the renewed sensibility enabled him to hear it nearly an inch away. The revival of the auditory nerves gained fresh force from each electrical sitting; and one may fairly presume that, as five applications have accomplished so much, by continued excitation the torpor may eventually be entirely removed.

LOUISVILLE, KY.

HOSPITAL GANGRENE.*

BY CARL PROEGLER, M. D.

The first changes which precede the outbreak of hospital gangrene often escape the surgeon's notice, and especially was this the case with my patients. My observations have detected the following formations:

1. The wound, which showed healthy red granulations, was covered at the beginning with a grayish, shining substance, and in the latter period with a yellow substance, which could not be removed from the granulations without bleeding. After its removal, larger or smaller ulcerations, with sharp, pointed borders, could be seen. Generally these ulcerations would extend as far as the cicatrized borders, and even they were destroyed by the ulcerative process.

2. The disease was ushered in by effusion of blood into the swelled and clouded granulations. This effusion did not last very long. Soon the granulations of the part formed a yellow mass, or small abscesses were formed among the granulations. In both cases the effects were the same. On some parts of the broken-down granulations there would be seen something very much resembling a soft chancre.

3. The disease commenced with deep-seated necrosis of the tissue, so that in twenty-four hours there would be a large ulcer, taking in all the surface. Its appearance depended on the nature of the adjacent parts. If the granulations themselves were soft and juicy (*sit venia verbo*), and lay upon soft parts, as on muscles and on loose tissue, they presented an appearance for the most part shiny, gray or yellow, and pulpous. But when the granulations were on harder tissue—firm fascia, tendons, or periosteum—they were then glossy, but not as much so as in the other formations.

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* With special reference to a pamphlet by Prof. Koenig, Rostock.

At times apoplectic patches of hemorrhagic formation, more or less extensive, could be seen in the jelly-like tissues, where there was more arterial bleeding, but never appeared on so large a scale as Pirogoff describes.

It is evident from the foregoing that the connective tissue has much to do with the formation of gangrene. By removing the deeper layers of the wound, we see that it has still more to do with the extension of gangrene. The connective tissue paves the way for the gangrene, which may extend itself longitudinally; and in the deeper tissues it is always the first attacked. This is especially true of the softer connective tissues.

For the most part, gangrene invades the soft, subcutaneous tissue, and follows it, loose muscles being preferred; but where the tissues are joined by sparse and firmly-connecting tissues, gangrene makes but slow progress, and holds good in almost all cases, so that one may know, according to the anatomical position of the parts affected, which region will be first destroyed, just as deep abscesses may be traced from a knowledge of their anatomical relations. The direction is very much influenced by the subcutaneous tissue nearest the wound, and according to its structure the extension of gangrene is slow or rapid.

If the skin is adherent to the deeper layer by short, firm connective tissue, or if gangrene should commence in a broad scar, usually we may prognosticate a less rapid extension than when the skin is adherent to a flabby tissue. Here progress is often so rapid that the wound will enlarge to double its size in a short time. For the enlargement of the wound the destruction of the skin is necessary; but this is always secondary. It commences when the subcutaneous tissue is already infected beyond the border of the wound and gangrenously destroyed. On the same scale, gangrene progresses deeply by intermuscular tissue. Here the muscular sheaths are the means which convey the disease into the lower parts, where it will extend as on the surface. The richer the tissue the more muscles there are in the surroundings, and the less firmly the single muscle fascia is joined with connective tissue the more the gangrene will spread. This may explain the rapid progress of gangrene in the muscles of the thigh, or rather between them, on the calf of the leg, and in other regions. In these muscles particularly we see the preference for connective tissue, and after this is destroyed the disease attacks the muscle, which will afterward become disintegrated by necrosis.

It seems also that gangrene makes its way in the vessels by the perivascular connective tissue, and in this way hemorrhage may, I think, be explained. I have had no opportunity of making an investigation, but it seems reasonable to suppose that the soft connective tissue surrounding the vessels is the means of furthering gangrene. The vessel is imbedded, as it were, in a tube of gangrenous tissue, and subsequently becomes itself gangrenous. With the commencement of gangrenous destruction of any part bleeding begins, and is obstinate probably for two reasons: 1. The clot in the gangrenous vessel is not a lasting one, because it hastens destruction; 2. The vessel can not retract into the tissue, being encircled by unhealthy, gangrenous tissue. The same character shows itself also when gangrene affects the bones. The periosteum is always more extensively affected, and is destroyed in great shreds. I frequently saw it on the anterior surface of the tibia, and in such a manner that skin and subcutaneous tissue remained intact, while the extension of the disease on the periosteum was very considerable. By the destruction of the periosteum and the tissue of Haver's canals necrosis is first induced, a fact which can be easily seen in new-formed bone—*i. e.*, with soft callus.

I do not say that tissues only will be invaded by gangrene. The remaining tissue finally perishes, as I have already said, and the skin will be more or less affected by gangrene. But the manner in which the skin perishes is very materially modified by the quality of the elements of which the underlayers are formed. If they are soft and net-like tissues, the disease will take hold very quickly, and, being undermined and thinned, the skin peels off. This undermined skin, which, as we shall see, is distinguished by redness and pain, perishes sometimes so extensively and so quickly that it becomes blue, gray, or black, and in very marked cases whole circles peel off. The decay of the skin is then followed by a little affection of the subcutaneous tissue. If the skin is connected by firmer underlying tissue, the integrity being almost a unit, gangrene does not spread so rapidly. A very marked contrast exists in the perishing of cicatrized skin. Here, on account of the short-fibered tissue which connects the cicatrix with the underlying parts, rapid extension of the disease is not possible. The whole cicatrized part, with the underlying tense tissue, is attacked simultaneously, and on that account destruction is isochronal. No undermining, and therefore no far-spreading, gangrene takes place; hence a more molecular necrosis here ensues, and the progress of the disease resembles an ulcer on the border of the skin more than gangrene in the common sense. It is the manner in which the disease progresses that enables us to distinguish between gangrene and molecular necrosis. The progress of the disease makes the latter what it is, without being able to assign an especial local name; and it follows that it is not always possible to fix the diagnosis in the beginning, but it may require several days of observation.

There are a series of changes in the wound—croupous coating, diphtheritic covering, hemorrhage, and circumscribed necrosis of granulations of the scar, up to gangrene of the entire cicatrix—without it being possible to diagnose specific gangrene. These coatings are sometimes latent, as the croupous covering of the wound, so that it is not possible to make a diagnosis of hospital gangrene. As we have already pointed out, there are several light forms of gangrene; and it may be correct to assume that they are produced by the causes arising from hospital gangrene, especially when they occur in a room in which there is gangrene, or in which there is a patient who has or has had hospital gangrene. But the croupous covering is only significant when, after the coating is gone, the underlying tissues appear ulcerated and infiltrated, especially if the cicatrized border breaks down in the periphery and becomes ulcerated. The correct diagnosis of this formation and the distinction here drawn have no specific significance for the patient, since they affect neither the healing process nor his general feelings. But it is of great importance to the neighboring wounded if we admit the possibility of a direct contagion, and we must consider the disease according to analogy. I need mention here only tonsillar diphtheria as an example; for, granting that the product of diphtheria need not be the disease itself from which contagion spreads, still an innocent wound in one patient might become deep, pernicious, and gangrenous, because of the presence of gangrene in the ward.

We know that so-called croupous or diphtheritic coatings, in an anatomical sense, especially in the first variety, may arise, without our being able to find any cause for them. We know, further, that chemical and physical agencies may cause the same; as, for instance, a somewhat stronger solution of permanganate of potassium may color some granulations singularly white, and their appearance might be taken for superficial diphtheritic deposits.

Of mechanical means we mention only the examination of wounds with a probe or finger, or extraction of spicula of bone, which may give rise to coatings of granulations, and sometimes deep-seated necrosis. I once heard a celebrated surgeon announce that the finger was the best probe, and subsequently saw him probing almost every patient for pieces of bone, etc., invariably inducing either gangrene or erysipelas.

Such practice is certainly an objectionable one, for the reason that we may detect in the majority of cases pieces of bone, etc., with the common probe. The gentleman in question, who was afterward recalled, will be remembered by my American friends who served with me in Germany as having acquired the enviable name of "bone-hunter."

There may be further causes in the interior of the wound or its secretions, which may give rise to local inflammation in the granulations and surrounding tissue, and generally terminating in "*necrosis of the tissue*." I found on granulating surfaces, with deep-seated ulceration and purulent matter, that the granulations broke down in circumscribed rows, the remains of which showed an ulcerative deepening in the surface, which spontaneously healed. Sometimes this is repeated on several places of the ulcerations, but especially on those which are exposed to overflow from purulent matter. Occasionally these cases are ushered in by apoplexies of the granulations; and I have often observed spontaneous healing occur when the secretion of pus ceased. It sometimes appears with foreign bodies, which are imbedded in the soft parts, and cause secretion. Pieces of bone, projectiles, and especially pieces of cloth, are the exciting cause. I have seen a deep-seated gangrene on the calf of the leg arrested by the removal of the foreign body. Diagnosis is exceedingly difficult here. With œdema of the granulations, ulceration takes place, and the borders and deep-seated soft parts may become gangrenous; but after free incision, which gives vent to the pus and foreign body, the wound quickly cleans itself.

I have not been able to observe whether syphilis causes similar changes in the wound, but I have treated a number of syphilitics in which healing was quite normal. When several wounds occurred in a patient, very often those most remote from the gangrenous ulcer remained unaffected.

About the duration and progress of gangrene I am not able to communicate anything based on facts; but I had occasion to observe that the wounds after healing often preserved a tendency to local croupous or diphtheritic granulations, to hemorrhages, necrosis, and ulcerations, and sometimes even severe relapses occurred.

Hospital gangrene is generally ushered in by fever, but it is difficult to say whether it precedes or follows it. In some cases I observed violent shaking, as in ague; but the local symptoms could be noticed, as coating of the wound, hemorrhage, deep-seated destruction, and redness at the periphery of the wound, with much sesitiveness; temperature as high as 39–41° Cel. In deep-seated ulceration fever was generally more intense than in milder cases. The more hidden the gangrene, and especially where it occurred between and underneath the bones, the longer the fever would last.

I have very rarely seen pyæmia in even ugly and deep-seated wounds. As the gangrene I witnessed was mostly in French soldiers, who seem to be very susceptible to the disease, it is quite noticeable that so little pyæmia occurred. Does gangrene confer in a certain degree an immunity from pyæmia? Neither saw I much erysipelas.

After being discharged from the German service, at the close of the war, I went to France, where I had an opportunity of trying the treatment as laid down by Professor Koenig, in the very able and interesting article to which reference has already been made. An extensive use of carbolic acid and permanganate of potash soon convinced me that they were comparatively inefficient, at least in all the deeper-seated varieties of gangrene. In the more superficial forms of the affection, as ulceration of the granulations and diphtheritic coating, these remedies may be useful; but as for any specific action on the part of either, I was never able to detect it. A remedy for hospital gangrene can only be a deep-going and an infection-destroying caustic. Without stopping here to discuss the merits of the several caustics in use, let us inquire if it be possible to reach gangrene when it is seated underneath the skin, between the interstices of the muscles, with any other remedy.

We use a remedy which fills the pouches and folds of the cavity; we even apply the actual cautery; expose the hidden parts by the knife; make incisions in the skin in many directions; split fascias and muscles, so as to bring the remedy in contact with the diseased parts. But how little does all this accomplish; and the knife has at last to be resorted to.

That we are not able in extensive gangrene to expose the folds and pouches without the knife is clear; and my experience in our own war, and a somewhat extensive private surgical practice, proves the correctness of this view. The French surgeons rely too much on the cautery; and the patient, on account of intense fever, goes from bad to worse. I unhesitatingly say that the scissors and knife play an important part in the treatment of gangrene, for with them we can reach and expose the deepest parts; and it is gangrene in those parts which generally produces septic fever and loss of life. I myself, like Prof. Koenig, hesitated in the beginning to cut very extensively; but by and by I became bolder, and divided not only large parts of but even entire muscles. It is a good deal better that the knife should cut muscles, and the caustic destroy the affected part, than that gangrene should make havoc in both the muscle and surrounding healthy tissue.

For superficial gangrene cutting is certainly not necessary. Here Cooper's scissors and the caustic are sufficient. If the parts are exposed, we should select a suitable caustic; and I agree with Prof. Koenig in considering the actual cautery objectionable for several reasons. First, it takes a long while to get it ready; then it is somewhat uncertain in its action, and an iron of different size and shape is required for the several folds and pouches.

Fluid acids and caustic potass. are not of convenient use, and their effect is not very visible in deep-seated parts. A caustic should be, first, constant in its action ; second, it should have the power to reach the deeper structures, and control the healing process of the same ; third, convenience of application ; fourth, it should be competent to reach all the folds and pouches of the part. According to Koenig, chloride of zinc combines all these requisites. It should be but little diluted, rather oily. Bits of cotton should be dipped in this solution, and afterward pressed out. A sufficient number of these pieces are placed either flat on the surface of the wound, or partially pressed, in variously-formed pellets, into the folds of the tissues. The advantage of this method consists in this, that the surgeon himself may prepare the solution and press these small tampons into the wound. Zinc acts only as a caustic where tissue without epithelium is present. The tampon accommodates itself to the parts, while we can measure the depth and time that it should remain. The longer it remains the more will the caustic reach the deeper parts. Before applying the caustic, chloroform to blunt the sensibility should be used. It is sufficient for most cases to let the tampon remain eight or ten minutes ; very seldom are fifteen or twenty minutes necessary. The crust formed is whitish, and it is always five or six days before it separates. But we may see much sooner whether or not gangrene has stopped spreading. The signs are that the inflammatory redness on the periphery of the wound begins to fade, and the general appearance of the patient improves, the fever subsiding In the mean time the wound may be moistened either with lime-water or carbolic-acid compresses. We have in this way healed very many deep wounds, when they could be reached, with a single use of the caustic, so that the high fever subsided in two days. If untouched parts should remain, the caustic ought to be used again ; but it is very seldom that we observe them after thoroughly removing the crust. The ugliest wounds for healing are compound fractures from gun-shot wounds, in which there is an infected cavity between the fragments, or in wounds which, on account of their being covered by bones, can not be exposed as wounds under the scapula. Here one use of the caustic will seldom be sufficient.

Koenig points out the treatment of the bleeding which occurs in the cases already described. After gangrenous destruction of the femoralis, after ligating the vessel, hemorrhage ensued, and as *ultimum refugium* the *iliaca externa* was tied, and bleeding controlled; but the result was gangrene of the foot, and for that reason the tampon was substituted afterward in hemorrhage in gangrenous tissue. In two individuals very much bleeding occurred; in one probably from the ulnar artery in fracture of the ulna, in the other from a wound on the outside of the femoralis, below Poupart's ligament. In the latter, by dividing the sartorius and the greater part of the rectus and tensor fasciæ, between which the gangrene extended, the bleeding was at once arrested by the zinc tampon. In the former the zinc tampon alone was sufficient.

If the following mechanism of the process of bleeding be accepted, it is self-evident why and how the arrest of hemorrhage occurs by using the caustic. We suppose that the sheath of a vessel, with the perivascular tissue, is first attacked by gangrene, but not destroyed entirely down to the border of the gangrene; and that the infected vascular tube thus encircled with gangrenous tissue can neither form a thrombus nor the vessel itself retract. Both disadvantages must, under favorable circumstances, be bettered; for by using the caustic both the vessel and perivascular tissue will be deeply destroyed, the formation of clots effected in the now healthy tissue, and retraction of the vessel will then be able to accomplish the closure.

Aurora, Ill.

Reviews.

Skin Diseases: their Description, Pathology, Diagnosis, and Treatment. By Tilbury Fox, M. D., M. R. C. P., Fellow of the University College, Physician to the Skin Department of University College Hospital. First American from last London edition. Edited by M. H. Henry, M. D., Surgeon to New York Dispensary, Department of Venereal and Skin Diseases, Fellow of the New York Academy of Medicine. New York: William Wood & Co. 1871.

The names of the author and editor of this work are an ample guaranty of its excellence. Dr. Henry stands in the front rank of dermatologists in this country, as Dr. Fox does in Europe. We agree with Dr. Henry that no work on dermatology in our language — in truth, we may say, in any language—combines so completely the results of a thorough knowledge of the pathology of skin diseases, such sound clinical observation, and so rational a system in the application of therapeutics. It is a small book, condensed and clear, and contains all that is known of practical value on the subject. It is written in a peculiarly attractive style, and is equally adapted to the practitioner and the medical student. Except the description of rhinoscleroma added by the editor, and a reärrangement of the formulary, it is a reprint of the London edition. The paper, type, and binding do credit to the publishers. The profession in America had already cause to thank and honor Dr. Henry for his capital journal of skin diseases, and he now greatly increases our obligations to him by placing easily within our reach the most practical, most useful, and best book on diseases of the skin extant.

In the first chapter the importance of the study of skin diseases is enforced by many arguments. Skin diseases are excessively common; they are specially calculated to educate the faculty of minute observation. They afford ample opportunity for gaining the confidence of patients, being ailments which are seen as well as felt. Again, their inveteracy and disfiguring character often affect in a peculiar manner the personal comfort and vanity of men and women, so that relief is estimated at a comparatively high value, while the good or bad effects of treatment in the majority of cases can be readily appreciated by the patient. Many cutaneous maladies being contagious, it is highly important to have positive and thorough knowledge on this point. An error in diagnosis may allow the dissemination of ringworm or other eruption in a family or school, and thus bring discredit to the practitioner and discomfort to the patients. Accurate observation of morbid changes in the skin may throw much light on the pathology of internal organs. The successful study of skin diseases necessitates a knowledge of diseases in general, and the only successful practitioner in cutaneous ailments is he who is master of the details of general therapeutics.

There is a certain unity of character about diseased actions in various parts of the body which justifies us in instituting a comparison between the morbid processes in different organs. A recognition of the changes in one will not infrequently throw light upon the nature of those occurring in another organ about which some doubt exists. One of the most important relationships which should be considered is that of the skin and kidney functions. The skin is often made to relieve kidney disease, and the converse may frequently be effected. Considerable difference exists in the same disease in different climates. Lichen ruber, scrofulosis, and lupus are more severe on the Continent than in Great Britain. In Syria and Egypt syphilis is much milder than in other parts of the world. Well-fed, meat-eating nations suffer much less than others with most of the ulcerative affections.

Dr. Fox does homage to Willan, and declares himself a Willanite. The principle of Willan's system is perfectly right, the details alone being defective. Willan's labors, gauged by the medical circumstances of the time in which he lived, take the highest clinical rank. They gave an impulse to the study of skin diseases in England, and secured that country an enviable standing in regard to dermatology, which it is hoped she may continue to hold.

Chapter second is devoted to general pathology and elementary lesions. A large number of cutaneous diseases are inflammatory in their nature. The line of demarkation between ordinary nutrition and inflammation is often difficult of demonstration. Inflammation in many cases arises out of an exaggerated action of those processes that are in operation in healthy nutrition. Inflammation does not consist of a special something introduced from without, but is simply an alteration, in one sense, of the relative activity of conditions that make up healthy nutrition; and it would seem to be excited by disorder of the blood, of the nerves, and even of the tissues themselves. It is to be hoped that these facts, so clearly enunciated by Dr. Fox, may soon be universally accepted by the profession. In this chapter the pathology of maculæ, erythema, papula, vesicles, blebs, pustules, squamæ, and tubercula is carefully elaborated.

In the third chapter the causes of blood, tissue, and urine change; influence of age, sex, flannel, scratching, etc.; conditions which determine the local development of disease; and the comparative frequency of the different skin diseases, are set forth. We are too apt to attribute diseases to blood changes, and to overlook the tissues themselves and the nervous system as the seat of origin of disease. Wilson's doctrine, that skin diseases are of both local and general origin, is adhered to. In England eczema is the most frequent skin disease. Rosacea comes next, and next comes psoriasis. In America our observation is that acne is most frequent, and that eczema comes next.

Under the head of general diagnosis the modifications of disease produced by diathesis, chronicity, remedies, scratching, abortive development, and the co-existence of two or more affections are pointed out. Important points in diagnosis are the mode of onset, the temperament, the duration of the disease, the recurrence of the disease, the occupation of the attacked, the age of the patient, and the seat of the disease.

Referring to prognosis, Dr. Fox correctly says that skin diseases are rarely fatal. Pemphigus neonatorum, ecthyma cachecticum, rupia, and pemphigus foliaceus are most likely to be followed by fatal results. The older the patient is before hereditary predisposition shows itself the more likely is he to get well. The presence of a scrofulous or syphilitic habit, pernicious hygiene of all kinds, frequent recurrence, co-existent disorder of mucous surfaces, local degenerations of tissue, marked chronicity, symmetrical arrangement of the eruption, intemperate habits, dyspepsia, uterine disorders, dentition, old age, or infancy, all conduce to protract the cure or render it difficult. Lepra, psoriasis, ichthyosis, erysipelas, eczema, urticaria, and lichen are most likely to recur. All parasitic diseases are curable.

Dr. Fox's therapeutics must commend itself to the modern and practical physician. To our mind it is almost unexceptionable. He says the principles of treatment applicable to diseases in general must be adopted in reference to diseases of the skin. The basis of most cutaneous eruptions is inflammation. That must be treated upon ordinary principles. We must not forget that in the early states of eruptive disease local irritation plays a very prominent part. One of our chief aims should be to check or prevent this, adopting as much as possible a soothing plan of treatment.

This does not appear, he says, to be the generally-received opinion; nay, the empiricism of modern times has an exactly opposite tendency, and it is decidedly true that many treat skin diseases by attempting to overwhelm by medicinal action the natural progress of the disease. In a therapeutical point of view, skin diseases divide themselves into two classes—those which are purely local and those which are general. Among the local, practically speaking, are parasitical, papillary, nævoid, hypertrophies of normal structures, such as molluscum, keloid, horns, certain pigmentary changes, chillblains, burns, scalds, etc. Among the general are blood diseases of acute and specific character, which require mere conduction through their normal stages. Others are due to various degrees of debility, demanding general tonic or alterative action, or the employment of specific remedies. In all cases special attention must be directed to the influence of diathesis. The gouty, the scrofulous, the rheumatic, the sanguineous, the syphilitic, etc., all call for their appropriate remedies irrespective of the kind of local eruptions; or, to put the case in another way, the general treatment in the same disease varies according to the general aspect of the patient. All deviations from the standard of health must be rectified before or in conjunction with the employment of special medicines. In a large number of cases disorders of the general health, which appear to have little connection with the mischief, are the exciting or determining causes.

In reference to local treatment in the general diseases, the theory is to soothe the part at the outset, in the secretory stage; to use alkaline washes and slight astringents. In the quiescent or early chronic stage, mild stimulants, absorbents, and finally revulsives; taking care in all cases to remove crusts, scales, and the like by poulticing, warm foments, or greasy applications. In the very young the health of the nurse requires attention, and it is often advisable to make the milk of the nurse the medium of medicinal action. The use of irritants is to be specially avoided in the young, whose skins are delicate. In all wet diseases (the secretory) the local remedies should be used in a liquid form; in the dry, in the form of ointment. The formation of thick crusts does not seem to be favorable to the use of ointments.

The free action of the kidneys must be carefully enforced. It is one of the most important points of treatment. Antiphlogistic remedies are blood-letting, emollients—*e. g.*, the tepid bath, mucilaginous and acidulated drinks, but especially the acetates of ammonia and potash. Where we wish to preserve the eruption from being injured for fear of ulceration, as in zona, pemphigus, and rupia, we employ mucilaginous fluids—*e. g.*, oatmeal gruel; or even absorbent powders—*e. g.* lycopodium. Local maceration, by glycerine especially, is useful in hard, dry, cracked states—*e. g.*, psoriasis palmaris. Irritation, if general, is allayed by tepid sponging, gelatinous and alkaline baths. Baths are useful for purposes of cleanliness, also as antiphlogistics, as soothing agencies, and as a means of employing various medicines. The antiscrofulous remedies are cod-liver oil, iodides of iron and potassium internally, and iodide ointments, iodine baths, and the like externally; the antiherpetics, as they are called, are typified by sulphur; the nervine tonics are quinine, alkalies, aconite, strychnine, and alkaline baths; the antisyphilitics are bichloride of mercury and iodide of potassium internally, and mercurial ointments externally; the gouty remedies are colchicum and alkalies, etc.; the sanguineous, antimonials, etc.; the antisquamous are arsenic internally, and tar externally.

And here Dr. Fox gives the treatment of skin diseases in a nutshell. True, we are utterly opposed to antimony and blood-letting, both of which are suggested by Dr. Fox; nor have we any faith in iodide of potassium in scrofula; nor do we believe, we must say, in a sanguineous or a dartrous or a herpetic diathesis; but still in this Dr. Fox may be right and we wrong.

Dr. Fox states that pellagra, or Italian leprosy, existed, in 1830, in twenty thousand out of a million and a half of the Italian population. Pellagra is due to insufficient and improper food, and other bad hygienic conditions, but appears especially to come from diseased Indian corn (ergoted maize), which is the chief food of the poorer Italians. Genuine leprosy, elephantiasis græcorum, appears to be due to bad and deficient diet and malarial influences. Though incurable, Dr. Fox has seen benefit in its treatment from aperients followed by quinine. It is non-contagious. Once a common disease in Britain, it has now almost disappeared under drainage, increased and improved food, and the generally ameliorated physical condition of the masses. The subjects of two cases shown us by Dr. Fox in London, and of three seen on the Continent, were the sons of persons who had lived in tropical climates, or who had themselves acquired the disease in India. One was a citizen of New Orleans, who had gone to France to be treated.

The so-called "army itch," spoken of by Dr. Fox, we are confident, from extended observation of the affection in the Confederate army, is no distinct disease. It is prurigo, developed in improperly fed and clothed and uncleanly persons by various sources of irritation, such as scabies, pediculi, etc.; sometimes impetiginous, sometimes eczematous, and sometimes ecthymatous.

Dr. Fox agrees with Hebra that plica polonica is not a disease at all, but merely a matting of the hair from filth, neglect, etc. He regards quinine, perchloride of iron, and turpentine as the best remedies for purpura. We have found aromatic sulphuric acid most efficacious. In acne his first step is to restore the general health, and then by thorough ablution and rubbing, together with astringent or stimulating applications, the disease is cured. In hair diseases he pursues a similar course, and has much faith in cantharides and nux vomica externally. We can testify to the efficacy of the practice in both classes.

A clear and judicious summary and an extensive and excellent formulary greatly add to the value of the book. Like Erasmus Wilson, Dr. Fox has incorporated with his index a glossary, containing the derivation and meaning of terms employed in the work.

This most admirable book would be still more valuable than it is if it contained colored plates of all the dermatoses described. All medical works should be picture-books. Object-teaching surpasses all other modes of conveying instruction. To the reader who has never seen the disease the most minute and lucid verbal description must often fail to convey the desired idea. But, despite this imperfection, Dr. Tilbury Fox's is still the best book on dermatology that has appeared in any language; and it affords us sincere pleasure to be able to speak thus of the work of a friend who is as charming as a man as he is excellent as an author. L. P. Y., JR.

Clinic of the Month.

[The "Clinic" for this month is made up mainly of abstracts from the fourth volume of *Trousseau's Lectures on Clinical Medicine*, which has been translated by Dr. Cormack and recently published by the New Sydenham Society. While the extracts contain perhaps not much that is altogether new, they relate exclusively to treatment, and serve to illustrate, as far as they go, the practice of the lamented physician who was esteemed the foremost practitioner among the Paris faculty.

DYSPEPSIA. — When dyspepsia is associated with well-marked chronic gastritis its treatment is subordinate to the treatment of that affection, and consequently consists in the use of remedies for inflammation of the stomach. In this, as in every other form of dyspepsia, regimen constitutes the most important part of the treatment. The first requisite is to reduce the quantity of food taken, so as to render it proportionate to the aptitude of the stomach. This does not imply the necessity of putting the patient on low diet. The selection of the particular kind of food which ought to be prescribed is found by the majority of physicians to be a great difficulty. We doctors have all a strange manner of advising our patients on the subject of diet. If we ourselves are fond of tea or coffee, we are indulgent to those who use them habitually or even immoderately. If we prefer this or that kind of wine; if we have a fancy for strong meat—beef, mutton, or game; or the flesh of young animals—veal or chicken; or if we fancy fish, we are apt to allow them to our patients.

In fact, it is not unusual for all the clients of a physician to be placed by the physician on the same diet as he himself adopts.

The law by which we ought to be guided in regulating the regimen of a patient is to recommend the food which the patient has found to agree best with him. Should a person tell you that milk acts on him like a purgative, you will avoid ordering him to take milk, although it is perfectly well digested by most persons; avoid ordering an article of food which might induce vomiting, diarrhea, and absolute indigestion. Nevertheless, how many physicians, without considering individual peculiarities, invariably order milk diet in chronic affections of the stomach! Therefore ascertain exactly the dietetic aptitudes of your patients, find out even their *fancies*, which vary with the person's state of health, and still more perhaps with the state of his disease. A man who has been suffering for some time from dyspepsia has a wonderfully correct knowledge of the aliments which will best agree with him. Find out what they are, and recommend him to use them, though they should seem preposterously unsuitable, and personally you should have an antipathy to them.

There are certain ordinary rules, however, which ought not to be neglected. As a general proposition, light soups (made with or without animal food), poultry, fish, and non-farinaceous vegetables are suitable in chronic inflammation of the stomach; provided always these articles have not been found improper by the individual's own experience. In reference to drink, after making due allowance for individual idiosyncrasies, the general rule is to allow only a very small quantity of fluid to be taken, and to recommend fermented drinks, wine, or sometimes beer, diluted with water.

Regularity in the hours of meals is a point of no inconsiderable importance. It not unfrequently happens that dyspepsia arises solely from imperfect mastication, caused by loss of teeth or by the patient swallowing his food unchewed.

In such cases to indicate the cause of the malady is also to indicate the means of cure.

When dyspepsia is dependent upon a chronic inflammation, which has retained to a certain extent its acute character, topical modifying agents, substitutive remedies, are indicated. Among them emetics hold the first place. Their part does not consist in freeing the stomach from the saburral matter or bile which load it. To seek merely to evacuate these secretions would be as useless as to sweep away the morbid secretions which cover the skin affected by eczema. Although in a case of poisoning the action of emetics is mechanical, their operation is totally different in dyspepsia. Here they act as substitutive agencies, as modifying powers.

Tartar-emetic, for example, when brought into contact with a mucous membrane, acts in the same way as upon the skin—that is, by determining violent inflammation; but this inflammation, subordinate to the quantity of the agent by which it is excited, undergoes spontaneous cure, is therefore transient, and that is the characteristic of every inflammation excited to produce a therapeutic result. We substitute for the preëxisting gastric inflammation another kind of inflammation, transient in its character, and which will cease spontaneously. We act in the same manner as when we employ irritant collyria in inflammation of the ocular mucous membrane, or caustic injections in blenorrhagia. Exactly in the same way emetics act beneficially in the treatment of dyspepsia. It is also by modifying the gastric inflammation, and not by causing evacuation by stool of the saburral matter, the bile, and the morbid secretions of the stomach, that calomel, gray powder, blue pill, and other mercurials prove useful in numerous cases. Both emetics and purgatives, however, must be cautiously administered; for we can not induce frequent vomiting in a dyspeptic without running the risk of going beyond the limits proposed.

Dr. Lasègue has obtained beneficial results in such cases by the employment of injections containing subnitrate of bismuth and chalk. Their utility is not less in the dyspepsia of chronic gastritis. They ought to be given in large doses. The chalk, mixed with an equal quantity of subnitrate of bismuth, ought to be taken, as a general rule, before meals, in doses of thirty to sixty grains each.

The secretions of the stomach resume their normal character on the cessation of the inflammation of the gastric mucous membrane. It is necessary, however, in some cases to give special aid to the secretory functions, which are in greater or less disorder. Certain acids—such, for example, as lactic and acetic, or, better still, hydrochloric acid—are excellent remedies in the dyspepsia of chronic gastritis. At the same time--and the fact is remarkable--while some persons are benefited by acids, others derive no good from them. To such it is necessary to administer alkalies. It is difficult to determine which class of remedies will prove most suitable, and it is also difficult to state the manner in which acids and alkalies act. We only know that in chronic affections of the stomach the patient, after having been subjected to the treatment of which we have just been speaking, retains difficulty of digestion, sometimes alkaline mineral waters, and sometimes, though not so frequently, acid mineral waters, are administered with success.

Bulimic dyspepsia, which is that form of the affection accompanied by a feeling of emptiness of the stomach soon after eating, is characterized by diarrhea supervening almost immediately after meals; and patients thus affected will tell you that they digest very rapidly, that their food is not heavy on the stomach, that their stomach is in excellent order, and that the disorder is only in the intestines.

The means at our disposal for the treatment of these cases are, first, opium. This medicine, although sometimes deplorably misapplied in the treatment of diseases of the digestive organs, is in the class of cases now before us more useful than any other remedy. To derive from it, however, all the benefit it is capable of imparting, it requires to be given with the greatest circumspection. It is impossible for me to tell you the exact doses in which it ought to be administered. In each particular case the physician must decide this question by considering the tolerance of the individual for opium. There exists great diversity in this respect, not merely in the differences of tolerance in individuals, but also in the difference between the degree of tolerance which the same person has at different times, according to the varying circumstances in which he may happen to be placed. Some persons can bear enormous quantities of opium; others are affected by a single drop of laudanum. This statement is applicable to adults, but young children are sometimes narcotized by even one fourth of that quantity. Nothing is so difficult as to judiciously manage opium. No remedy is dispensed so improperly, so prodigally, and with so little inquiry into the idiosyncrasy of the patient. This observation has a general bearing, and applies not alone to dyspepsia.

In bulimic dyspepsia, with constant diarrhea, opium is a wonderful remedy, provided it be administered in moderate doses. The laudanum of Sydenham is the most convenient preparation to employ, for its doses are the most easily apportioned. It is prescribed at first in doses of *a single drop*, the dose being augmented if necessary, before and not after eating. To obtain success this precaution is indispensably necessary. The small quantity of opium received into the stomach before digestion has commenced is sufficient to keep duly quiet and regular its muscular excitability, the inordinate extent of which causes the symptoms you have to combat. This too it accomplishes without suspending organic sensibility. Opium, on the contrary, administered in large doses, producing effects beyond those intended, causing slumber both of the muscular excitability and organic sensibility, arresting at once the muscular movements and the secretion of the gastric juice, increases in place of calming the disturbed state of the digestive function, to the performance of which regular muscular movements and secretion of gastric juice are indispensable.

Belladonna is undoubtedly useful in this form of dyspepsia, though its beneficial action is less decidedly beneficial than that of opium. You are aware that belladonna, in common with all the poisonous *solaneæ*, produces relaxation of the bowels, while opium causes constipation. So decidedly is this property characteristic of belladonna that the physician avoids administering it to patients affected with diarrhea. But while there is a reason for not prescribing it in cases of diarrhea in which the cause of the flux exists in the intestine itself, it would be wrong not to employ it in the cases to which I am now directing your attention. I have no hesitation in stating in the most positive manner that cases of this class occur in which belladonna renders services very nearly equal to those derived from opium itself. Here a word of explanation is necessary. Experience tells us that the poisonous *solaneæ* are very often our most powerful means of conquering constipation. You all know the effects of tobacco. To some individuals a cigar is the best laxative. There are others upon whom tobacco produces no laxative action, but upon whom this is produced by a pill containing a grain or half a grain of the extract of henbane. These substances perhaps owe this singular property to the poisonous principle which is the active base of all the *solaneæ*. Belladonna, the utility of which in some cases of constipation is so well known, acts in virtue of this principle. Here the same remark applies which I made in respect of opium: it can only be administered in very small doses. A centigramme (the seventh part of an English grain) is generally sufficient; though one is sometimes obliged to give a somewhat larger dose—say, for example, a centigramme and a quarter, or two centigrammes and a half; but there is rarely any necessity for exceeding these quantities.

It is important in prescribing belladonna, or any other remedy derived from the *solaneæ*, not to exceed certain limits, otherwise a sort of paralysis might be induced, which would have to be treated by aromatic or alcoholic stimulants, or, better still, by the preparations of nux vomica. It is consequently necessary, as I have just said, to begin with small doses, increasing them if necessary. In the same category as the *solaneæ*, certain antispasmodic remedies, such as valerian, asafetida, and oxide of zinc, are indicated. All of these remedies ought to be given in very small doses, and always at the beginning of meals.

Acid dyspepsia, often associated with flatulent dyspepsia, is a more common affection than the bulimic. The physician frequently makes serious mistakes in the acid form of the disease, in which sour eructations and copious secretions of gas occur during digestion. We physicians have the misfortune to be very bad chemists. Nevertheless, with an amount of assurance proportionate to our ignorance, we do not hesitate to apply to therapeutics the little knowledge of chemical theories which we possess. Laboratory experiments having taught us that acids neutralize alkalies, we lay hold of the fact. Taking it as a starting-point, the treatment of certain cases of dyspepsia seems simplicity itself. The stomach contains a large quantity of acid which, say we, must be neutralized. We can do this by administering magnesia, bicarbonate of soda, lime-water, or chalk. Notwithstanding our reasoning, the evil increases, the acid becoming more abundant in place of diminishing. We nevertheless cling to our original opinion. In the increased severity of the symptoms we only see an additional reason for insisting more strenuously than ever upon our treatment. We double or triple the doses of the alkali when we obtain no beneficial results from the doses first prescribed. Soon afterward, very probably, the patient is seized with diarrhea. In place of benefit from our treatment, matters have become worse. Being thus baffled, we impute to the obstinacy of the disease consequences entirely due to our untoward interference.

In such cases a certain amount of physiological knowledge will prevent our falling into the errors toward which our chemical theorizing tends. Physiology teaches that the gastric juice is naturally acid; that acidity is its constant condition, both in man and the lower animals, irrespective of species, sex, age, or food; that it is due to the presence of phosphoric, hydrochloric, and lactic acids, but particularly the latter, which alone is found in a free state. These acids are secreted in greatest abundance during digestion, and their secretion is indispensably requisite to the due performance of the functions of the stomach. When digestion is not going on the gastric secretion is less abundant and feebly acid, or sometimes it is neutral or even alkaline. The normal secretion of gastric juice is sometimes partially suspended, but there are other cases in which it is secreted in too great quantity. Irritation of the mucous membrane of the stomach, provided it neither proceed to the extent of inflammation nor too far, causes increased secretion. Excessive irritation or inflammation arrests the secretion.

In cases of this description you can not counteract the acidity by any alkalies acting as chemical agents. The experiments of Claude Bernard upon animals prove that the secretion of gastric juice, and consequently the acid fluids of the stomach, increase when alkalies are administered, while the secretion is delayed or diminished by giving acids. These positive facts entirely set aside the trivialities of chemical theory, which are of no use as guides in the treatment of disease, and can still less lay down therapeutic laws to us. When chemists tell us that alkalies are useful in a considerable number of cases of acid dyspepsia, they only repeat what we had previously learned from clinical experience. But when they state that the benefit is produced by the alkalies neutralizing the acids, we reply that no neutralization has taken place, or if there has it has been only to a very limited extent. On the other hand, we maintain that these remedies act as powerful modifiers, which not only place their stamp upon the organ, but also impart a peculiar modality to the whole economy, in virtue of which the functions are regulated, and the abnormal acidity of the secretions is corrected.

Flatulent dyspepsia. Dyspepsia in hysterical women, in hypochondriacal men, in all very nervous persons, in great eaters, and in old people, is chiefly *flatulent;* that is to say, characterized by the formation of a large quantity of gas, and accompanied sometimes by acid eructations supervening immediately after meals. In this form of dyspepsia alkaline preparations are also of some use, if given only for a few consecutive days, and immediately followed by the administration of bitters. Thus for five or six days the patient ought to take at the beginning of his two principal meals, and on going to bed at night, a powder composed of magnesia, chalk, bicarbonate of soda, four to six grains each, mixed immediately before taken in a fourth of a tumbler of water. This to be followed by the employment of bitters, among which quassia ought to occupy the chief place. In the morning fasting and at midday, at an equal interval between the two principal meals, the patient ought to drink a cup of the infusion of this wood, prepared by leaving a tea-cupful of cold water for fifteen or twenty minutes in a goblet made of quassia; or, which is still better, by macerating two grammes of quassia shavings in cold water for from four to six hours. I have seen this form of dyspepsia yield much more rapidly to this simple treatment than to the long-continued use of alkalies. In these cases wine of cinchona is also indicated. It ought to be given either immediately after meals, or immediately after the patient has taken a small quantity of food, in order to prevent the pain in the stomach, which is apt to be excited when taken fasting.

In flatulent dyspepsia also decided advantage is obtained by the use of certain *liqueurs* administered after meals. Those which I prefer are *anisette fine de Hollande*, and the yellow liqueur of the Grande-Chartreuse, which is simply an alcoholic tincture of various aromatic plants. I need hardly add that these liqueurs must be taken in very small quantities. Other aromatic preparations may be substituted for them. For example, we may give the infusion of illicium anisatum, or star anise, one of the ingredients of the *anisette de Hollande*, or we may give an infusion of a mixture of star anise, common anise, ginger, and cascarilla bark. These substances, when reduced to coarse powder, are weighed out in packets containing fifty centigrammes of each ingredient. Their infusion is taken immediately after meals.

Hydrotherapy is a method of treatment in this kind of dyspepsia which is not less efficacious than those I have now reviewed. Its use in other forms of dyspepsia is not great. Let it be understood that the hydrotherapic treatment which I now speak of is hydrotherapy methodically applied, and carried out in a regular manner.

Sea-bathing I place in the same category as hydrotherapy. The patient ought to remain a very short time in the water, if he bathes on our northern ocean-coasts. On the sea-shores of the southwest of France—in the Mediterranean—the duration of the bath may be longer, as the climate is warmer. In these regions, in addition to bathing in the sea, the patients may use baths of sand naturally heated by the sun. Patients ought to remain in these baths of sand for from fifteen minutes to an hour; in fact, till a decided reäction has been established in the skin.

Unfortunately sea-bathing, traveling to mineral springs, and hydrotherapy in a hydrotherapic establishment are means which are not accessible to all. In such cases the hydrotherapy may be pursued according to the following plan, which, though less efficacious than the methodical system of a hydrotherapic establishment under medical direction, is nevertheless really beneficial. Home-hydrotherapy consists in enveloping one's self on getting out of bed in the morning in a wet sheet slightly wrung out of cold water. After remaining for one or two minutes wrapped up in the wet sheet, you rub yourself or get yourself rubbed with it. You are then rubbed with linen which is quite dry, but not warmed. After this you dress, and as soon as possible start on a walk, which you continue for three quarters of an hour. The hydrotherapic operation may be repeated at night before going to bed. Great advantage may also be derived from immersions, not exceeding three minutes' duration, in cold salt-water. Hydrotherapy pursued after this fashion will suffice in many cases so to modify the action of the whole economy as to cure the gastric disturbance, and restore to the stomach its lost tonicity.

The sympathetic dyspepsia which often accompanies uterine affections, such as displacement of the womb, associated with chronic catarrhal inflammation, is often cured simultaneously with the cure of the uterine affection. In these cases local treatment, cauterizations of the neck, for example, which will modify the catarrh when dependent upon ulceration, properly applied bandages, hypogastric bands, more rarely the use of pessaries—local treatment in fact—will prove very useful, not only for the uterine lesion, but also for the gastric symptoms which depend upon it. These means, however, are not in general sufficient in themselves. It is necessary to have recourse to general treatment, in which an important place must be assigned to sea-bathing and hydrotherapy.

In cases of *dyspepsia associated with sluggishness of the large intestine and obstinate constipation*, belladonna is marvelously efficacious. Begin by prescribing it in very small doses; a centigramme each of the extract and of powdered leaves may be administered morning or evening. If the constipation does not yield after one or two days, the dose of belladonna may be gradually increased, to one, three, four, or five centigrammes, according to circumstances; but five centigrammes in one day must never be exceeded. Thus administered, belladonna is perhaps the most active remedy with which I am acquainted in this kind of dyspepsia. It is generally sufficient to produce regular stools, and at the same time to reëstablish the digestive functions so thoroughly that individuals who had fallen into a state of deplorable debility and emaciation rapidly regain strength and plumpness. The remedy, however, acts in these cases only in an indirect manner—that is to say, by restoring to the large intestine its lost activity; but this activity is communicated synergetically to the other parts of the digestive tube, and thus it is that the stomach regains its original energy.

When the belladonna proves insufficient, its operation may be assisted by giving every evening a tea-spoonful of castor-oil simultaneously with the belladonna. The castor-oil may be administered in a capsule of gelatine. When the bowels are regularly open these means may be discontinued. This treatment, I repeat, is sovereign in the cases now under consideration; but it is in an especial manner sovereign as a means of restoring regularity to the disordered functions. To secure a continuance of these beneficial effects the coöperation of the patient is required. Patients affected with obstinate constipation, dependent upon sluggishness of the intestine, ought to go regularly to the closet every day at the same hour. At first their efforts may be unavailing, but they must nevertheless persevere; and if they do so the results will ultimately prove satisfactory.

Should these means, should the belladonna treatment, prove inadequate, injections are permissible. But, if used, it is essential that the injections should consist of cold water, and be administered in very small quantity. Injections of tepid water ought to be expressly prohibited, for their use ultimately leads to an increase of that atony of the intestine which we are endeavoring to combat.

Let us suppose that the constipation has resisted the use of these means; it is then necessary to have recourse to purgatives, particularly to aloetic preparations, such as dinner pills, *grains de santé*, and similar remedies. Immediately before eating, from one to four of these or such like pills may be taken. Rhubarb, in a dose of from fifty centigrammes to a gramme, may be advantageously substituted for the pills, without causing diarrhea, and with the effect of producing one stool regularly in the twenty-four hours.

THE THERAPEUTICS OF THE PRESENT DAY.—Dr. Henry Kennedy, of Dublin, has contributed to the Practitioner some interesting observations on this subject, which he concludes with the following propositions: 1. That the proper position the physician holds in reference to the administration of drugs is that he treats and, with the assistance of nature, cures disease by their means. 2. That in our endeavors to improve therapeutics too much must not be expected, inasmuch as there is a limit beyond which we can not pass, and this limit is and must remain far short of certainty. 3. That if we ignore the labors of our predecessors we will commit a grave mistake; for they have left after them a mass of therapeutic facts which it would not be possible even at the present day to excel, and therefore our labors should begin where theirs ended. 4. That the physiological dose of each drug is the proper one to use, as it is only then its therapeutic virtues can be ascertained. 5. That at present the doses of many drugs are much smaller than our predecessors used, and therefore the results in our hands can not but be unsatisfactory. 6. That our predecessors, wherever it was possible, used medicines in the form of powder, which had the great advantage of being free from any risk likely to be caused by any other mode of preparation. 7. That experiments thus made must lead to more definite results than any made with other preparations of the same drugs. 8. That compound medicines, like the tincture of perchloride of iron, should be recognized as such, and not as simple drugs. 9. That the use of diluents is a very important principle to recognize in treating disease. 10. That a knowledge of human physiology is essential to give anything of a scientific status to our therapeutics.

PODOPHYLLIN.—In an article on the uses of this remedy, in the Practitioner, Dr. Charles Phillips says: "The vomiting and diarrhea which occur in gastro-enteric inflammation are often arrested, and with rapidity, by the exhibition of a few doses of the one sixth to the one twelfth of a grain every four or six hours. In the remittent fevers of children, where there is much heat of skin, headache with delirium, a quick and full pulse; dry, brown, and furred tongue; nausea, or vomiting of bilious matter; pain or uneasiness in the stomach; sleeplessness, with a general sense of weariness and a grinding of the teeth during sleep; podophyllin, taken in doses of one tenth of a grain every four hours, will often cut short those various symptoms in a very remarkable manner. The effect is much improved by the exhibition of occasional doses of aconite. When the stools of young children and infants have been white or clay-colored, podophyllin has frequently brought the bile into their motions by administrations in doses of one tenth to one twentieth of a grain every six hours, persevering in the use of it for a short period. In these cases it also regulates the bowels. Prolapsus of the rectum in children may also sometimes be removed by administration of similar doses of podophyllin every night and morning. In dyspepsia and in hepatic derangements, characterized by loss of appetite, acid regurgitation, putrid taste in the mouth, flatulence, and a tendency to constipation or to diarrhea, one tenth of a grain of podophyllin, exhibited night and morning, will frequently induce the best results."

Notes and Queries.

CHRONIC CYSTITIS TREATED BY ESTABLISHING A VESICO-VAGINAL FISTULA.—Dr. Parvin contributes the following to that excellent journal, The Clinic, for November 4, 1871:

"Mrs. —— has suffered from cystitis for three years, in which time she has gone the usual round of treatment, both constitutional and local, without experiencing the least benefit. In addition to the vesical trouble she has uterine retroversion. This I have greatly relieved by Cutter's pessary; and thus too there was for a time a slight improvement in the condition of the bladder; but it was only slight. Two weeks ago, the patient being under the influence of chloroform, and lying upon the left side, knees and chin approximated, the perineum drawn back with a Sim's speculum, a curved trocar was passed along the urethra, and caused to penetrate the vesico-vaginal wall just beyond the vesical meatus; and through the opening thus made the blunt blade of a pair of scissors was passed into the bladder, and an incision nearly an inch in length, directly in the median line, was made. When the hemorrhage, which was not great, ceased, a tube, somewhat larger in diameter than a female catheter, half an inch in length, and provided at either extremity with a perforated 'button,' was inserted into the opening. The buttons, of course, were to secure it in position, one being within the bladder, the other in the vagina. The former was concave on the face looking toward the vesical cavity.

"The bladder is syringed out at least once daily with a large quantity of warm water through the tube, using an ordinary Davidson's syringe, but having adapted it to a curved tube eight inches in length, slightly bulbous at its extremity, which has five perforations; this tube readily entering the vesico-vaginal tube, and permitting the escape around it from the bladder of the injected water.* Thus far the condition of the patient has been decidedly improved, and there is every reason to hope that in the course of six or eight months, by the *rest* given the bladder and the faithful use of warm-water injections, the cystitis will be cured, and then the fistula can be readily closed.

"*Remarks.* The operation here detailed has been performed by our distinguished countryman, Dr. Emmet, and by the late Sir James Simpson. With each doubtless it was *original*, but to which one *priority* should be accorded is uncertain; for, as far as I have been able to learn, the date of the first operation has never been published. Indorsed by such eminent masters, it certainly is not only justifiable, but advisable in cases of cystitis that have baffled all other reasonable modes of treatment. This is itself an eminently rational treatment, for it gives the bladder just what naturally, as well as by experience, is suggested in disorder or injury of numerous other organs or parts of the human body—*rest.* In many instances this is one of the most valuable of therapeutic measures; sometimes indeed the only one required.

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* "This washing out the bladder may be done while the patient sits on a bed-pan; but a better way is to have her lie on her back near the edge of a couch or bed, which is protected by rubber cloth, her limbs drawn up. It is easier for the operator, less unpleasant for the patient, insures the more thorough application of the warm water, and with anything like reasonable care neither the bedclothing nor that of the patient will be wet.

"So far as I know the method of operating pursued in the case which has been detailed is my own, and I would suggest it for the consideration of those who may contemplate performing a similar operation, or indeed making vaginal lithotomy, as preferable to incision with a knife, on these grounds: less hemorrhage and more certainty in direction and extent of incision. As to the *direction* of the incision, of course it should be in the median line, and that is really a perpendicular let-fall from the apex of the vesical triangle to its base. As to extent, an inch is quite long enough, at most; and this will reach to the base of the triangle, a line drawn from the orifice of one ureter to that of the other, for the vesical portion of the vagina does not measure ordinarily more than an inch and a quarter, and in a case of chronic cystitis the probability is that it will be found less than this.*

"The tube buttoning into the bladder is a suggestion made to me by Dr. Emmet in correspondence—the shape and size are according to my own plan—and indeed it is a most useful and almost indispensable instrument; for incisions in a contracted, thickened, and irritable bladder are very liable to close. There is more difficulty in keeping them open than any one would imagine who has never tried the experiment."

Dr. A. T. Keyt, of Cincinnati, appears in a letter to the editor of The Clinic, in which he reviews the practice of Dr. Parvin. He says:

"In my opinion, it is not justified, for the reason, first, the operations required and conditions incurred are formidable evils; and secondly, the disease can be treated just as well by other means. No one will deny that a vesico-vaginal fistula is a severe affliction—one involving the deepest mortification and mental distress, besides the suffering from the local irritation inevitably set up in contiguous parts. A woman thus afflicted cheerfully submits to the torture of an operation, or if need be of repeated operations, in the hope of being relieved from her loathsome and distressing malady. The artificially produced fistula is no less an evil than that arising from disease or injury. In order to more fully appreciate the evil of this procedure, I will now consider the first operation, the essentials of which are thus described by Dr. Parvin: 'A curved trocar was passed along the urethra and caused to penetrate the vesico-vaginal wall just beyond the vesical meatus; and through the opening then made the blunt blade of a pair of scissors was passed into the bladder, and an incision nearly an inch in length, directly in the median line, was made. When the hemorrhage, which was not great, ceased, a tube, somewhat larger in diameter than a female catheter, half an inch in length, and provided at either extremity with a perforated "button," was inserted into the opening.' This is a very *painful* operation—so painful, I dare say, that without chloroform, the most aggressive modern genecologist would not have the heart to recommend it; and though chloroform will diminish the conciousness of pain, it adds the element of danger of immediate death from this agent, which is by no means too trivial to be taken into the account. It is a *bloody* operation. The parts are vascular, and, though pains may be taken to cut in the median line, more or less hemorrhage is unavoidable—a *considerable hemorrhage is probable*, and *a dangerous hemorrhage is not improbable.* This risk is the more apparent in that effectual means can not be here used to control the bleeding; adequate pressure is impractical, styptics are washed away, bleeding vessels can not be secured. It involves the risk of *shock.* This grave condition of sudden depression of the vital powers is very liable to ensue upon operations on the bladder, and this one can claim no exemption.

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* "Dr. Savage, On the Female Pelvic Organs, remarks: 'The urethra is about an inch and a quarter long. Allowing two inches and a half as the length of the urethro-vesico-vaginal septum, the anterior half of it is urethral.' Of course then the vesico-vaginal portion would have the same measurement.

"Debrouaix, *Traite des Fistules Uro-Genitales de la Femme*, Bruxelles, 1870, page 221, states that the length of the anterior wall of the vagina in women who have borne children varies between seven and nine centimeters; that is, from about 2.75 to 3.54 of one inch.

"Then follows the danger of *urinary infiltration.* The loose tissue between the vesical and vaginal walls, communicating, as it does, with the general cellular tissue of the pelvis, is very favorable to the diffusion of urine, and the space between the tube and the parietes of the bladder-wound gives freedom of passage into this tissue; and then an obstruction of the vaginal wound, which is more likely than not to take place, completes the conditions by which infiltration of urine becomes a probable event. Connected with this condition, and also additionally independent of it, is the liability to *pelvic cellulitis*, with its due and complicated train of local and constitutional evils; add to the list the danger of *peritonitis*, and it becomes unnecessary to specify further. Enough has been said to show that vesico-vaginal fistula is made at the expense of great suffering and danger. But this is not all; if the patient survive the distress of stillicidium, urinæ, before referred to, must next be borne, and for a length of time dependent upon circumstances. The experimenter will probably require a long time to determine whether the method will cure or should be abandoned. Nevertheless, the time will come when he will deem it expedient to remove the tube and close the fistula. A tube in the bladder with a button on the end of it can not be removed without a considerable enlargement of the aperture by incision, and a vesico-vaginal fistula can not be closed without a considerable and very tedious operation. In all this the woman is again tortured, and her life is again placed in jeopardy. Happy is she if after one operation she can rejoice in a fistula cured, and her fate be not to require a repetition of those painful experiences.

"All this is to be done and *suffered that the bladder may have 'rest,' and be syringed out with warm water through the tube*, when the natural passage-way, only an inch and a quarter in length, with its vesical meatus just in front of this artificial opening, affords every facility for carrying out these objects of treatment. And no reason can be found that cystitis should not be treated as well through the urethra as through a fistulous passage. But are there any *results* of this strange plan upon which an argument can be ventured in its favor? Of the results in the cases managed by Dr. Emmet and Sir James Y. Simpson I know nothing. The result in Dr. Parvin's case is thus reported by himself *two weeks* after the operation: 'Thus far the condition of the patient has been decidedly improved, and there is every reason to hope that in the course of six or eight months, by the *rest* given the bladder and the faithful use of warm-water injections, the cystitis will be cured, and then the fistula can be readily closed.' This is inconclusive; two weeks time is too short to determine anything. *Hope* is good, but 'hope deferred maketh the heart sick;' and there is reason to fear, that this patient will become disgusted and disheartened, and demand to be relieved of her fistula long before the expiration of six months. However, we will await a further report; and in the mean time, for the sake of argument, I will grant that after a sufficient time a cure shall be effected in this case, and also that cures were effected in the cases bearing the distinguished names above mentioned, and yet the admitted results would not prove the superiority of the treatment; for doubtless the same assiduous personal attention of the physicians treating the cases through the urethra would accomplish equally favorable results. It is scarcely necessary to say that the facts supporting the ordinary plan are numerous enough, and yet I know that the treatment of chronic cystitis is often unsatisfactory, because to be successful it requires patience and forbearance on the part of the patient, and most assiduous, persevering care on the part of the attendant. Unhappily these qualities in one or both are frequently absent, and the consequence is a failure. But one has no right to inflict a personal injury on his patient that she may be made tractable, and he to feel the responsibility and interest in the case that will compel his care. This practice then can claim no results not attainable by ordinary methods.

"A word as to the claims of authority: Dr. Parvin finds his justification chiefly in that the operation had been sanctioned by two such illustrious names. I admire and respect the great lights; but I would not gaze on them till my eyes are dimmed for the contemplation of all other objects. It is a painful truth that our great masters are fallible, and really deplorable is it that so many are ready to blindly copy their errors. A question like this I choose to investigate on its merits, and so doing I arrive at the certain conviction that Dr. Parvin and his illustrious predecessors have egregiously erred; dangerous, unnecessary, and as such is deserving the unqualified censure of a profession whose noble mission is the practice of beneficence and humanity."

An anonymous correspondent, who manifests more passion than knowledge, in the same journal speaks of the operation as "a dreadful enormity," and calls on "Dr. Emmet to disavow his share in this horrible transaction." Dr. Emmet answers the call as follows:

NEW YORK, November 27, 1871.

TO THE EDITORS AMERICAN PRACTITIONER:

My attention has been drawn to a communication from Dr. Keyt, and an anonymous one, both published in The Clinic of November 18th, criticising the operation for chronic cystitis lately performed by Dr. Parvin. The writer of one of the articles states that "we shall expect Dr. Emmet to disavow his share in this horrible transaction." In answer, I have simply to acknowledge that the operation was done by my advice, and that the use of the trocar by Dr. Parvin is, I think, an advance in the mode of operating. During the past nine years, while I have been at the head of the Woman's Hospital, it has been of rare occurrence at any time that we have not had one or more cases of chronic cystitis under treatment by the method in question. It is evident that the objections made to the operation, although plausibly taken, are merely theoretical. It has never been practiced or proposed to resort to this procedure in cases of simple irritation of the bladder, or under any circumstances, until other means of relief have failed.

A certain number of cases of long standing, however, exist where the walls of the bladder have become thickened, and this hypertrophy is kept up by the increasing effort to force out every drop of urine as it passes into the bladder. This condition, I believe, is incurable by any other known means than that gained by the rest afforded after creating an artificial opening. If these gentlemen have ever had such a case under their care, and have been successful in curing their patient, no greater boon could be granted to suffering humanity than to give their method the greatest publicity. To inject the bladder in this condition, even with the use of a large double catheter, admitting of the free exit of the fluid, is an utter impossibility, except under the full effects of an anæsthetic. In my experience, instead of lessening the inflammation in such cases, it has been aggravated by the partial dilatation on injecting any quantity of fluid into the bladder which has long been contracted. The bladder has become denuded, to a great extent, of its mucous membrane, so that with the greatest care the jet of water will often cause hemorrhage, and without some force is given to the stream it will be of no benefit in dislodging the muco-phosphatic accumulation. So utterly wretched becomes even existence with this condition that I have not yet seen a case who would not cheerfully give her consent to brave all the horrors and consequences of the operation, even if true as depicted by these gentlemen, to obtain relief afterward. It must be borne in mind that this condition of the bladder for which the operation is practiced is of a most serious character, and that ultimately the inflammation will extend along the ureters and involve the kidneys. I have seen such a case, too late for relief, where I dared not operate in consequence of pelvic cellulitis, which had been set up from the inflammation of the bladder, and death resulted from uræmic poisoning. We are therefore justified in assuming a certain amount of risk for obtaining relief by this operation, and of practicing it until a better method is presented to the profession.

Now, the facts of the case are these: entire relief and a permanent cure can be obtained by the operation provided the fistula remains sufficiently open for the free escape of urine, and rest be given by this means to the bladder, for six months or longer, until all thickening of its walls has disappeared. I have cases under observation who were treated by this method years ago, who have remained perfectly well, and who would have been in their graves long since but for this operation. The operation itself, with the proper means of exploration, is as simple as any in minor surgery, and attended with as little risk. The great difficulty in the after-treatment is to keep the fistula from closing too soon. As to the loss of blood, it is so trifling, in my experience, as to be of no consequence, provided the incision is made in the median line, sufficiently remote from the neck of the bladder and the cervix uteri. The fear of urinary infiltration is entirely theoretical, from the fact that it can only take place with an accumulation in the bladder, and the object of the operation is to avoid this. The only serious objection to the operation is the inconvenience to the female from the escape of urine. After the edges of the fistula have healed there will remain no longer any irritation of the bladder or excoriation from the urine, provided the vagina is syringed out once or twice a day, and the surface of the vaginal outlet protected by some simple ointment. By a proper attention to the washing and changing of the napkins all smell can be avoided, and the female may attend to the duties of life without her condition being known. Notwithstanding all the inconvenience to which the patient may be subjected, her condition has been improved beyond comparison with her previous one, and it is borne most cheerfully.

The difficulties in closing ultimately the fistula are scarcely worthy of comment at this period, when every step of the operation has become so well known and simplified as to be within the scope of many surgeons all over the country. The opening, under any circumstances, will scarcely be found larger than a No. 12 bougie, with its edges lying in contact, and free from all tension. In the majority of cases, I believe, if the edges were freshened with a pair of scissors, and the patient kept in bed, with a catheter in the bladder, for a week, that union would take place even without the introduction of sutures.

I have not entered into greater details from the fact that I have been, for some time, under promise to Dr. Parvin to prepare an article on this subject for the American Practitioner, and I shall now, under the circumstances, endeavor to fulfill my promise as soon as possible.

Yours respectfully, THOS. ADDIS EMMET.

The Clinic of December 9th contains the following from Dr. Parvin:

"To my critic I will first reply, and then present some arguments in favor of the operation which has found so swift a witness against it in Dr. Keyt. So swift a witness! The very day The Clinic was issued the criticism was written. The Doctor reads a report of what to him was a new operation—an entire novelty in surgical therapeutics—and without waiting, as I shall presently prove from his own words, to comprehend the principle upon which it was based, without reflecting upon the analogies which strengthen it, and without inquiring as to the successes which fully establish its claim to the indorsement of the profession, he at once assumes the *role* of an extemporaneous critic, arrays argument more formidable in number than in force, and deals out condemnation and censure with a lavish hand. Possibility of error on his part, from ignorance or other cause, or of hasty judgment, he does not admit. His attitude is far from the humility which generally characterizes men of such attainments with such facility of use.

"One thing must be obvious to unprejudiced readers of his criticism: objections to the operation are mainly theoretical—this, that, or the other might happen. A single pertinent fact outweighs all such reasoning. Another thing must be equally obvious: he often seizes upon the most superficial reasons, just as an unarmed man in an open field, suddenly needing means of offense, might pick up that which lay to his hand, even if nothing better offered than clods of earth or tufts of grass.

"The first two of these objections are: the operation is 'very painful,' and if an anæsthetic is given—of course he selects chloroform—it may kill. These objections are without special pertinence; and I will merely say, as the operation is a brief one, the risk from anæsthesia is almost at its minimum.

"But '*a considerable hemorrhage is probable, and a dangerous hemorrhage is not improbable.*' More than fifty years have elapsed since vaginal lithotomy was first proposed, and numerous cases of this operation have occurred in that time. A similar vesico-vaginal section has not unfrequently been resorted to for the removal of foreign bodies from the bladder. Now, surely Dr. Keyt ought to find at least a few cases in these two classes in which 'dangerous hemorrhage' happened. So too he ought to condemn Sims, Erichsen, Baker, Brown, Savage, and others for their indorsement of vaginal lithotomy. Even did this 'dangerous hemorrhage, which is not improbable,' occur from making the fistula, possibly position, cold, and pressure might arrest it, or, these failing, a few twisted sutures certainly would.

"'*Shock*' is the critic's next horror. What utter poverty of thought, if not of knowledge, to adduce this when vaginal lithotomies and operations for genito-urinary fistulæ in almost countless number testify to its complete improbability.

"'*Urinary infiltration*' next stares us in the face, and it happens in this wise: the vaginal wound closes, the vesical remains patent, and the urine runs round the tube; can't get out into the vagina, won't go back into the bladder, but hastens into the connective tissue between, and so has a free course into 'the general cellular tissue of the pelvis.' Urine wise and wonderful, with such an elective affinity for cellular tissue that it disdains to make its exit through the urethra; but fashions for itself a new pathway, ever so many pathways, even though it has to go up-hill at the start—for the patient after these operations lies upon her back—and up-hill most of the time in its marvelous pelvic meanderings! Dr. Keyt's supposition that the vaginal wound may close over the 'button,' which is one fourth larger than the tube, is extremely probable—almost as probable as that the urine would enter the connective tissue rather than escape by the urethra in case such closure occurred.

"Pelvi-peritonitis and pelvi-cellulitis are the next dangers that the prolific imagination of Dr. Keyt produces. Are these forms of inflammation common or exceedingly rare after operations for vesico-vaginal fistulæ? In such operations there is generally much more cutting done in the vivifying of the fistulous margin. There may be twenty, thirty, or forty punctured wounds made in the introduction of the sutures, and there may also be liberating incisions. Besides, the operations are longer. Yet if pelvic inflammation is rare after them, still more will it be rare after the operation which Dr. Keyt so strongly condemns.

"The 'button' next fastens his attention. To get it out when it is proposed to close the fistula will 'require a considerable enlargement of the aperture by incision.' My belief is that the tube, with the dreadful button, may be dispensed with after the first two or three weeks, the liability to premature closures being by that time much lessened. I have removed it in the case upon which I operated. This objection, which is simply trivial, therefore falls to the ground.

"The poor patient 'is tortured and her life put in jeopardy' by the operation for closing the fistula; and of course the Doctor, not straining a point, not anxious to make out a case, but in his ample charity and his large knowledge, suggests that the first operation will fail, and there will be 'a repetition of these painful experiences.' But suppose the fistula should close without any operation? Mr. Lawson Tait, in recounting the cases upon which Professor Simpson operated, remarks that the great difficulty is not in closing, but in keeping it open. But let an operation be required, there is not 'torture' if an anæsthetic is used, and the 'jeopardy,' as statistics show, is exceedingly small, while the success of the first operation in closing an opening no larger, so situated, and with no loss of substance, is almost certain.

"'All this is done and *suffered*,' says the critic, '*that the bladder may have* "*rest*," *and be syringed out with warm water through the tube*, when the natural passage, etc., affords every facility for carrying out these objects of treatment.' Either Dr. Keyt puts up a very small man of straw to knock down with his clods and tufts of grass, or else he is utterly ignorant of the fundamental principle upon which the operation is based. The prime object of making the fistula is, as Sir James Simpson said, to secure *physiological rest* to the diseased organ. What are the functions of the bladder? The bladder is a receptacle into which the urine flows, in which for a time it is retained, and from which it is expelled by contraction of the muscular coat. As long as it is a practically closed cavity containing urine, as long as its muscular contractions are to be invoked for the expulsion of that urine, it has not, in the diseased condition to which we refer, rest; but when a fistula is made which allows the urine to escape almost as soon as it enters the bladder, and thus there is no irritation of inflamed surfaces, and there is no call for muscular contraction, as there is no urine to expel, the organ has that rest which is so important for the restoration of its integrity.

"Dr. Keyt boldly asserts 'this practice can claim no results not attainable by ordinary methods;' and this assertion comes from one who says he knows nothing of the results of cases thus treated by Sir James Simpson and by Dr. Emmet. Because in his cases of cystic disease he has got on well by local medication, therefore all cases can be thus successfully treated, or rather no case can be cured by making a fistula which could not be as well cured without. Such is the position he takes. This is merely negative evidence, and is of very little value in comparison with positive testimony. If A saw B murder C, what does the negative evidence of a hundred or of ten hundred who did not witness the deed amount to? Dr. Emmet, Sir James Simpson, Mr. Lawson Tait, Prof. T. G. Thomas, and others give positive evidence on the question of this operation. In a letter received from Dr. Thomas the following language is used: 'Cystitis *often* requires a vesico-vaginal fistula. It is frequently incurable by other means.'

"Let me say a word as to the fistula which Dr. Keyt magnifies into such a terrible evil, 'involving the deepest mortification and mental distress, besides the suffering from the local irritation inevitably set up in contiguous parts.' With a properly adapted urinal there need not be one tenth the trouble to the patient which the sympathetic critic supposes. The lady upon whom I operated, attractive and accomplished, and at a period of life when society has numerous charms, accepts her fistula as a blessed relief from the agonizing sufferings which she had so long endured, sufferings which skillful physicians had vainly sought by all the known means of local medication and constitutional treatment to remove, and to-day declared to me that she would rather go through life with her infirmity than have to endure again the spasms of the bladder, the burning in it, and the difficult and frequent micturition which tortured her by night and by day. Should Dr. Keyt visit Indianapolis I will be most happy to have him see this patient. Once seeing her, and hearing fully the history of her case, should he review a similar operation, I trust he will spend less time in trivial objections, be less dogmatic, and not indulge in such unqualified and causeless condemnation, as if, enthroned upon Walnut Hills, his opinion was truth, and his word was law in the science and art of medicine.

"And now, turning from the consideration of Dr. Keyt's criticism, I wish briefly to present some of the claims which this operation has upon the approval of the intelligent members of the profession.

"One of the most obvious indications in the treatment of many diseases is to secure rest to the organ or part affected. This is a curative agent whose value can scarcely be exaggerated. Mr. Hilton, in the first of his lectures on *Pain and Rest*, most beautifully shows the wisdom of nature's teaching in this regard, and demonstrates, from the condition of growth, which 'is the antitype of repair, prefiguring the physiological capabilities of existing structures to repair themselves,' the therapeutic value of rest. Without waiting to adduce any of the countless illustrations from medical therapeutics of the truth referred to, let me present a few from surgical practice. In anal fissure or ulcer the surgeon, by rupture or by section of the sphincter, puts the parts at rest. Tenotomy is sometimes resorted to where muscular contraction causes pressure of inflamed surfaces. In fractures rest is the first, often the only, condition upon which the cure depends. Mr. Allingham (St. Thomas's Hospital Reports, 1870) resorts to *colotomy* 'to relieve, and perhaps cure, an otherwise incurable case of stricture and ulceration of the rectum.'

"*Accidental* cures have sometimes occurred thus: patients have been cut for stone, but no stone found. Nevertheless, the symptoms which led to the belief of the existence of vesical calculus disappeared after the lithotomy. Three such cases occurred in the practice of Roux. Probably these have been cases of cystitis.

"One of the most interesting cases bearing upon the present discussion I have found is recorded by Gunther (*Bibiliotheque du Medecin Practicien*, vol 3, p. 552), where nature cured a case of cystitis by forming a urethral fistula.

"The practice of Mr. Cock, of Guy's Hospital, in certain cases of urethral stricture, was to puncture the bladder through the rectum, saying: 'Let us withdraw the urine from the urethra altogether for a few days, and the urethra will recover itself, so that we may be able to cure the stricture with ease.'

"Sir Henry Thompson, in referring to cases where supra-pubic puncture of the bladder was made, and a tube introduced, remarks: 'I have known patients who have passed all the urine through a tube above the pubes for ten or fifteen years, and who had active and comfortable lives in consequence, the natural passage being completely obstructed. One of them, who had suffered greatly before, and was now in perfect comfort, told me that he did not know whether this mode of passing water was not preferable to the original one.'

"Now, is it not entirely rational in itself, entirely rational in the light of these analogies and illustrations, that chronic inflammation of the female bladder, which has baffled other means of treatment, may be cured by securing complete *rest* to the diseased organ? By means of an opening into the vagina which shall permit the ready escape of the urine with no contractile effort invited or required on its part, let it for a while be no longer a bladder, but a surface over only a small portion of which the renal secretion passes in its way out, and we have it in the most favorable condition for cure. The bladder in case of chronic inflammation has its cavity lessened, its muscular coat hypertrophied, while its mucous lining may be the seat of ulcerations. Indeed, in the cases successfully treated by Professor Simpson by making a fistula, and reported by Mr. Tait, there was what is described as chronic perforating ulcer. Give rest to the organ that this ulceration may heal, that this inflamed mucous surface, no longer irritated by being bathed in urine and by constant motion from vesical contractions which it invokes, may return to its normal condition, and that the hypertrophy of the muscular tissue may diminish.

"The results of operations justify the faith which sound reason gives for this treatment. Professor Simpson's patients were cured; and I know that Dr. Emmet has been quite successful in the cases upon which he has operated. What number he has thus treated I do not know, but it is expected that he will soon present the profession with a paper upon the subject, in which full statistics will be given.

"As to the methods of operating, Prof. Simpson's was to introduce a grooved staff along the urethra, and slit up the posterior fourth of the urethra and about an inch of the posterior wall of the bladder. Dr. Emmet's operation is similarly performed, but does not involve the urethra at all. In my own, as previously stated, a curved trocar and canula was passed through the urethra, the vesico-vaginal wall penetrated, then scissors used to complete the operation.

"There are many other points which I would like to present in this vindication—vindication not of myself (individuals are little or nothing, principles and truth everything in medicine), but of a most valuable method of treating some cases of a peculiarly obstinate and painful disorder; vindication from unjust censure, ignorant it is true, but none the less unjust; but so much space has been devoted to answering Dr. Keyt's objections that I will not further tax the kindness of the editor of The Clinic.

"NOTE.—The Clinic for December 2d, which I have just received, contains another of Dr. Keyt's arguments against the operation—viz., '*ulceration and sloughing of the wound.* As a matter of fact, the trickling of urine would be from the first into and through the wound around the tube rather than through the tube itself. The surfaces thus separated and irritated would readily take on inflammatory and ulcerative action, running into gangrene.' It is hardly worth while to follow a critic who honestly adduces such an objection, and sustains it by such reasoning, neither of which could come from one having either practical or theoretical knowledge in the matter, and a reader having this knowledge would not expect a reply; but for Dr. Keyt's benefit—if an individual so rich in imaginative power and almost as prolific in arguments as the *tænia solium* in eggs can be benefited—I will state that Prof. Simon's observations and experiments have proved that the urine is entirely innocuous to wounded surfaces, and hence this objection of Dr. Keyt's, sustained by some very bad reasoning, amounts to nothing. Dr. Keyt ought to have known these investigations by Simon—they are ten years old at least—as well as a good many other things relating to the question at issue, before entering the field of criticism; but really his facility for argument seems to increase with his freedom from knowledge, so that he gives the crudest theories and most absurd fancies with the gravity of demonstrated truth. There is little hope of his now or ever learning anything that does not conform to his own opinions and theories, and he will probably live and die a self-chosen priest of a decayed faith."

THE MEDICAL PROFESSION OF CHICAGO TO THE MEDICAL PROFESSION OF THE UNITED STATES.—We insert the following with great pleasure:

"The terrible calamity which has recently fallen upon the city of Chicago, and upon various portions of the Northwest, has awakened the sympathy of the world, and both money and material have been sent to the suffering districts with an abundance and alacrity which has never before been witnessed; but no one who has considered the extent of the losses, or the amount of suffering entailed, can feel any apprehension that the work of charity is likely to be overdone, nor indeed that it will be possible to fill the measure of the actual want. There ought to be no relaxation in these general measures of relief for many months to come, nor is it probable that there will be; but there is one class whose misfortunes appeal most especially to the members of our profession. More than a hundred physicians in Chicago, and probably as many more in other portions of the Northwest, have lost all they possessed. The intelligence received by us, from trustworthy sources, is of the most painful character; and it is with reluctance that we make public the fact that up to this moment seventy-seven physicians in Chicago alone have been driven to the necessity of placing their names upon the list of those requiring pecuniary aid. God forbid that we should delay to give them help. We beg you to reflect that the situation of these physicians, with their families, is peculiar. The laborer may find immediate employment at his usual wages; the merchant may buy and build upon his credit; the clergyman has his congregation, much less able to pay than formerly, but nevertheless responsible for his support. The physician has ordinarily none of these resources. With neither house nor furniture, horse, carriage, nor instruments, he must do what little he can, and wait the slow returns from a population reduced, like himself, almost or quite to beggary. Our calling is never a lucrative one, but in Chicago to-day it can hardly be expected to supply the necessaries of life, and perhaps not for a year to come.

"In our opinion these seventy-seven doctors, and probably as many more, will need from $500 to $1,000 each to carry them safely through the year, and to put them once more upon their feet. From $50,000 to $80,000 is our lowest estimate of what should be sent to the Chicago doctors' relief fund. With this money they may be placed upon salaries, and in return perform such public services among the sick and poor as may be required.

"We have already received from the physicians of New York over $5,000, of which sum $4,000 has been sent to Chicago. The remainder is retained for the purpose of aiding the physicians of Wisconsin and Michigan, and will be forwarded to Chicago or elsewhere as soon as we receive information as to where it is especially needed. Many of the other large cities have sent in similar contributions. We have no means of knowing how much has been contributed, but we have no doubt the sum is totally inadequate to meet the exigencies of the case. It is proposed therefore to continue the organization of the committee, and not to cease efforts during the winter, unless its services should seem to be no longer required.

"To physicians living in scattered districts we take the liberty of suggesting organized action through county or other local associations. Those who prefer can send their contributions direct to Walter Hay, M. D., Secretary of the Chicago Medical Relief Committee, No. 384 Michigan Avenue, Chicago; or to the treasurer of this committee, Samuel T. Hubbard, M. D., No. 27 West Ninth Street, New York. We earnestly hope that no physician in the United States will omit to contribute something, however small the amount may be, to this charity, in any way and through any channel they may choose; but that they all give, and that speedily. If our medical brethren knew only a few of the examples of individual suffering which have come to our knowledge, but which we do not feel at liberty to publish, their contributions would not be delayed.

"Surgical instruments may be sent to the following surgical instrument-makers in this city, by whom they will be forwarded free of charge; George Tiemann & Co., Darrow & Co., Otto & Reynders, Shepard & Dudly, and Stohlmann, Pfarre & Co. Books will be received and forwarded by William Wood & Co.*

"It may be necessary to add, in explanation of a diversion of a portion of the funds originally intended only for the physicians of Chicago, that the probability of an appeal from the physicians of the burnt districts of Michigan and of Wisconsin determined the committee to reserve a small portion for such an exigency; and further, that in consideration of the fact that the medical students of this city have given very liberally to this fund, it was determined to suggest to those having in charge the distribution of these charities that they will not overlook the claims of medical students who may in the same manner have been left destitute.

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*Contributions of all kinds will be forwarded, free of charge, by John P. Morton & Co., the publishers of the American Practitioner.

FRANK H. HAMILTON, M. D., *Chairman.*
ALFRED E. PURDY, M. D., *Secretary.*
SAMUEL T. HUBBARD, M. D., *Treasurer.*

RUSH MEDICAL COLLEGE, CHICAGO.—The following appeal, though dated November 1, 1871, came too late for insertion in our December number. We give it place here with much pleasure, and with the hope that every friend of the fine institution which was recently destroyed by fire will respond liberally to the call for aid to assist in its rebuilding:

"This college is among the oldest institutions of learning in the Northwest, having been in operation since 1843, at which time the region now tributary to Chicago was but sparsely populated and had little wealth. During this time it has supplied a pressing need of this new country. It has educated a large number of young men, who are scattered through our whole country, worthily filling places of great usefulness and responsibility; and for this, both themselves and the public are indebted, in a great measure, to the school in which they received their instruction. A large proportion of its students have been possessed of little save youth, hope, intelligence, and determination. Many of these, having been generously aided by the college, have taken rank among the most substantial members of the profession. The faculty at all times, since its organization, has been moved by an earnest desire to promote the best interests of the profession and the college. For this its members have labored faithfully and earnestly; they have met the pecuniary burden of the school from its first foundation, and four years since they erected from their own resources. at an expense of $70,000, the most ample and best appointed college-building on this continent, and filled it with every necessary appliance for successful teaching, and the influence and usefulness of the school has steadily increased from year to year. But in a day the college-building, with all its contents, was swept away, along with a large part of the city, in which it stood a peer among many other noble institutions of learning. The pecuniary loss of the faculty in the destruction of the college is light when weighed against others they have sustained. A number have lost nearly everything, and all have suffered much. The college must be rebuilt. Its past history, its future promise for good, demand no less. Under the circumstances, it is unreasonable to expect the faculty to do this unaided. The college is now in a condition to justify an appeal to its alumni and to society for some return for the favors it has conferred upon both. There is perhaps no field of benevolence that offers a richer return than to provide adequate and easy opportunities for the instruction of those who desire to become learned in the best means for assuaging pain and healing the sick.

"All donations may be remitted to Chas. T. Parkes, M. D., 462 Elston Avenue, Chicago, treasurer for the fund."

The trustees of the institution add the following:

> "For every donation of five hundred dollars the trustees will establish a perpetual free scholarship, which shall bear the name of the donor, and which shall be conspicuously emblazoned on the wall of the lecture-room. A certificate of this scholarship, engrossed on parchment, will be issued to the donor; which certificate shall secure to the bearer free tuition, and when found qualified free graduation. This certificate shall be perpetual in its operation; and thus the donor will have endowed for one student each year a free medical college."

CORRECTION.—In a notice of the fire in Chicago which appeared in the November number of the American Practitioner it was stated that both the medical colleges of that city had been destroyed. This was a mistake. The Rush Medical College was consumed, but the Chicago Medical College was unharmed. We publish elsewhere an appeal from the former.

REBUKE.—Dr. Logan, President of the State Medical Society of California, in an elaborate address recently delivered before that body, administered the following pointed rebuke to the fault-finders with the American Medical Association. He says:

> "There have appeared disparaging statements, strictures on the proceedings of our National Association, in medical and other journals, within the past six months, which, to say the least of them, are as disingenuous as they are uncalled for. Some of these censorious writers pretend to be, equally with us, anxious for the elevation of a noble profession, the promotion of science, the good of humanity, but they take a strange method of showing such proclivities. If, instead of trying with the spirit of the Commune to pull down, they would convince us of a more practically effectual mode of building up the sacred temple of our divine science, according to the present designs and specifications, all of us are ready to accept the new proposal, and would rather thank than censure those who offer it. But believing, as I do, that they can not improve upon the work commenced by a Davis, approved by a Chapman, a Knight, a Stevens, a Moultrie, and a Buchanan (the founder and the first president and vice-presidents), and continuously prosecuted up to the present hour by men equally as illustrious from all sections of our favored land; men whose reputation is bounded by no geographical limits—citizens of the universal republic of science; I say, believing thus, I can not refrain, as an officer of our National Association, bound by the duties of hospitality to our departed guests, from attempting to wipe out the aspersions which have been so ungenerously cast upon it."

CORRECTION.—A friend has called the writer's attention to the fact that in the last number of the American Practitioner he attributed to the late Dr. T. Hawkes Tanner a work by the living Dr. John Tanner, in a notice of the work in question—a mistake that he regrets having made, but which he is glad to have corrected. T. P.

THE CENTRAL KENTUCKY MEDICAL ASSOCIATION.—This Association held its third regular meeting at Stanford, on Wednesday, the 18th of October, in the Odd Fellows' Hall, at ten A. M. After a few words of welcome from the president, Dr. Spilman, the debate was opened by Dr. A. R. McKee with an excellent paper on *Fractures of the Long Bones, their Nature, Diagnosis, and Treatment*, which was followed by an animated discussion as to the best method of treating this class of fractures.

Dr. J. D. Jackson read an interesting paper on *Loose Cartilages in the Knee-joint*, with a case and removal, followed by recovery, exhibiting the body extracted.

Dr. H. Brown read a report of a case of *Entero-vaginal Fistula.*

Dr. R. W. Dunlap reported verbally a case of *Uterine Hemorrhage*, recurring every seven days. The periodicity—the only point of interest in this case—gave rise to considerable discussion.

Dr. Hunn reported verbally a case of *paralysis of the bladder, sphincter ani, and right leg* in a boy, the result of an injury received in falling from a wagon, the boy falling and striking himself on the wheel over the last lumbar vertebræ.

Dr. W. B. Harlan exhibited a case—the patient present and exhibited in person—of *Progressive Muscular Atrophy.* The patient, a man thirty years old, married and the father of several children, presented the prominent characteristic phenomena of this disease—a flattened and wasted appearance of the muscles, "*main en griffe*," loss of use of both arms, so that he has to be fed, though the atrophied muscles still respond to the galvanic current, fibrillary contractions of the muscles, etc. It began four years ago with a sensation of numbness in the left thumb, and has progressed uninterruptedly, the fibrillary contractions being now beautifully shown over some of the trunkal muscles, and especially those of the thigh. A point of interest in the case is that there has been no diminution in the sexual vigor.

Dr. J. D. Jackson exhibited the uterus of a girl fourteen years old, showing five small ovarian cysts in various stages of growth, the largest not being larger than a bullet.

The membership was increased considerably at this meeting, and the attendance was unusually large, Garrard County being well represented. A handsome entertainment was given by the "Lincoln County Medical Society," which added greatly to the enjoyment of the day, good cheer and good feeling being abundant. The next meeting will be held at Lancaster, on the third Wednesday in January next, at four o'clock P. M. Subject *Syphilis*, Dr. Huffman, of Lancaster, to open the debate.

GEO. T. ERWIN, M. D., *Secretary.*

THE AMERICAN PRACTITIONER.

FEBRUARY, 1872.

> Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.—RUSKIN.

Original Communications.

CHRONIC CYSTITIS IN THE FEMALE AND MODE OF TREATMENT.

BY THOMAS ADDIS EMMET, M. D.,

Surgeon to the New York State Woman's Hospital.

During the winter of 1858 I removed, through an artificial opening made in the vesico-vaginal septum, a calculus from the bladder of a patient in the Woman's Hospital. She had been an inmate of the institution several years before with a vesico-vaginal fistula, which had been closed previous to her discharge. As the bladder was in a diseased condition, by the advice of Dr. Sims, the artificial opening was left for the greater facility afforded in the treatment for restoring the organ to a healthy state. This idea was a new one to me at that time, and to Dr. Sims I believe is due the credit of the mode of treatment for cystitis in the female resulting from this cause. For the relief of a case of chronic cystitis following exposure and of long standing, I subsequently made an artificial vesico-vaginal fistula, with the view of giving rest to the organ by the free escape of urine. It was thought that by thus removing the exciting cause of the persistent tenesmus the hypertrophy of the walls of the bladder would subside.

This operation and view of treatment was considered original, and during the past nine years it has seldom happened that some case has not been under treatment by this method in the Woman's Hospital.

Prof. Willard Parker, of this city, presented at the annual meeting of the New York State Medical Society for 1867 a paper on "Cystitis and Rupture of the Bladder treated by Cystotomy," which was published in the Transactions for that year. The Doctor states that on January 3, 1846, he performed lithotomy on a male. He was unable to remove the stone, but the cystitis was relieved by the free escape of the urine through the opening. At the end of three months a fresh attack of cystitis came on, the kidneys became involved, and death resulted. This case seems to have been instrumental in drawing his attention to the subject. He mentions performing the same operation subsequently, but the history of the case and result is imperfect beyond the statement that "in a few months he had nearly recovered, and some months after he called upon me, and looked as well as any one could at his time of life."

November 23, 1850, Professor Parker operated at Bellevue Hospital on a case of chronic cystitis in the male. He states: "The object in view was to open a channel by which the urine could drain off as fast as secreted, and thus afford rest to the bladder, the first essential indication in the treatment of inflammation." The conception of treatment was perfect, and there has been no advance made since in the pathology. The patient died in a few days, and the autopsy revealed the fact that the kidneys had undergone degeneration. This case was published in the New York Medical Journal for July, 1851, vol. VI., and reported at length by Stephen Smith, M. D., assistant surgeon to the hospital. Although a favorable result was not obtained, it clearly establishes Dr. Parker's claims to priority for this mode of treatment of cystitis in the male. Previous to the reading of this paper before the State Society in 1867 I had been ignorant, however, of his views on this subject; and it is only a short time since that I have been able to obtain a copy of the journal containing the history of the case. Prof. Eve, of Nashville, reports the benefit derived from this mode of treatment in the male, after an operation performed in 1866, and the case is presented in Dr. Parker's paper.

At the last meeting of the State Society, February 7, 1871, Dr. Bozeman presented an interesting paper on "Urethrocele, Catarrh, and Ulceration of the Bladder in Females," which was published in the New York Journal of Obstetrics for February, 1871.

Dr. Bozeman details the history and successful result of an operation for the relief of cystitis performed January, 1861, the artificial opening having been closed the following June. The patient was cured; and nine years after the operation had had no return of the disease. It is stated: "To Prof. Willard Parker is due the suggestion of opening the male bladder for the relief of catarrh, and this encouraged me to extend the practice to the female bladder, as I have described. Dr. Emmet and other American surgeons have *since* adopted the practice in case of vesical catarrh in the female, and I doubt not with equal success." . . . "Delay in the report of my case of ulceration was due to the suspension of all medical journals in the South during the war," etc. This statement is unfortunately calculated to give the impression that the American surgeons who have practiced this mode of treatment since 1861 were indebted to Dr. Bozeman. With all due credit, this is not correct, as until his paper was presented he had given the profession no opportunity of knowing that he had ever operated. He has certainly not done justice to himself in so long delaying his claims; for he could scarcely be ignorant that this had been the practice at the

Woman's Hospital previous to and from the time of his coming to New York immediately after the war. I may also state that several cases of cystitis treated by this plan are detailed in my work on "Vesico-vaginal Fistula," published in July, 1868, and to his pen I have always accredited a flattering review of the book in one of the journals of this city.

Since the case referred to, from which the stone was removed in 1858, this mode of practice has been followed in similar cases, and the principle fully recognized. During the summer of 1861 I operated for the first time on a case of chronic cystitis in the female. The opening soon closed, and no improvement in the condition of the patient took place. I shortly afterward made a larger opening, through which the urine freely escaped. Ten months later I closed the artificial opening, as the thickened condition of the bladder had then disappeared. I have never seen a case of disease of the bladder as extensive as this was without the existence of any kidney complication. The mucous membrane of the bladder had, to a great extent, been lost, and the walls had become so hypertrophied that the bladder, as a hard mass, could be felt contracted behind the pubes, and was exceedingly tender on pressure. This case had been of many years' standing, and her suffering had made a wreck of both body and mind. She came under my observation frequently until some two years ago, since which time I have lost sight of her; but I can vouch for the fact that the bladder had remained in a healthy condition for eight years after the operation. I regret that the notes of this case, as well as of several others which occurred in my private practice, should have been lost.

At a meeting of the New York Obstetrical Society, held by invitation of Dr. L. A. Rodenstein in December, 1870, I presented the history of a case which I had just operated upon by making an incision transverse to the axis of the vagina, and in which an excessive hemorrhage had occurred. Among the invited guests present was my friend Prof. James

P. White, of Buffalo, who, in some remarks addressed to the Society, reminded me that he had assisted me at the operation in 1861, and, by a curious coincidence, was, I believe, present at the final closure.

During the autumn of 1862, shortly after her arrival in this country, an English woman, suffering from chronic cystitis, was admitted into the Woman's Hospital. She refused to submit to any surgical procedure, and shortly afterward died in consequence of the diseased condition of the kidneys. I mention this patient's case because she had been for some time under the care of Sir James Y. Simpson previous to leaving Great Britain, and the chief objection made to the operation was that so high an authority as Prof. Simpson had never intimated the necessity for such a procedure. The credit of this mode of treatment has lately been claimed for Prof. Simpson by Mr. Lawson Tait. Whether the idea after this date occurred to him, or that he was really indebted to this country for it, is of little bearing; but by this case the fact is proved that previous to the summer of 1862 he was ignorant of the method, and treated his cases simply by injections into the bladder.

Cystitis is of frequent occurrence from the too early closure of a vesico-vaginal fistula, resulting from parturition and before the tissues have regained a healthy condition, or as a result of failure in the operation to approximate perfectly the edges along the bladder surface, and thus leaving some denuded portion exposed to the action of the urine. I have operated some fourteen times for the removal of calculi from the female bladder. Nearly all these cases had been operated on for the closure of a vesico-vaginal fistula by other surgeons or by myself. In nearly every instance the cystitis was of sufficient extent to necessitate leaving the opening unclosed after the removal of the stone. In the worst cases means were adopted to keep the opening patulous; in others of a milder character the same treatment was followed of washing out the bladder several times a day as long as the injection could escape by the vagina. I believe in every instance the opening closed within two weeks where no means were employed to prevent it, and often it would do so in nearly the same time notwithstanding efforts to keep it open. These cases recovered ultimately, I believe without an exception, although in several instances where, on account of the urging of the patient, the opening had been closed too soon, the operation had to be repeated.

This operation is not advocated in all cases of cystitis, for it is a fortunate experience that a large number, if seen early, will readily yield to treatment. The necessary step in the beginning for success is, if possible, to recognize the exciting cause, that we may not lose time by treating the symptom alone. Neglect during labor to keep the bladder empty, exposure to cold, violence, and the habit of long retaining the urine, are the chief exciting causes of the most serious forms of chronic cystitis.

As some of the causes of irritability which may result in chronic cystitis, we may enumerate the different forms of dyspepsia from chronic derangement of the digestive organs, pressure of the uterus, and diseases of the rectum. With enlargement of the uterus, and partial or complete laceration of the perineum, this organ settles down on the floor of the pelvis, and by traction along the base of the bladder to the urethra chronic irritability of the bladder is frequently established. Retroversion of the uterus also, by which the cervix is thrown forward or upward, may excite the same condition. The existence of urethral polypi or other growths and ulceration of the canal must not be overlooked. It is necessary always to examine the condition of the rectum; for the presence of hemorrhoids will keep up irritation of the bladder as well as an unsuspected fissure.

I once gained great credit for the relief of an intractable case of irritable bladder by accidentally discovering a fissure of the anus, and healing that by lacerating the sphincter. This patient had been under the care of several excellent practitioners, who had treated the uterine condition with the idea that the bladder difficulty was due to it. There was no indication of any rectal trouble beyond the existence of habitual constipation, and after a movement of the bowels the pain in the bladder was excruciating. She had suffered for years with dysmenorrhea, and the uterus was both enlarged and anteverted. After the fissure was healed the irritability of the bladder subsided, and without additional treatment the dysmenorrhea ceased and the uterus gradually lessened in size. It is often necessary to use some form of pessary, by which the neck of the uterus will be lifted up from the floor of the pelvis, even if it is anteverted by so doing, and the instrument should be so curved in front that all pressure at the urethra will be avoided. Irritation of the bladder is often excited by the relaxed condition of the upper portion of the vagina, which allows of chronic prolapse of the uterus. For its relief some modification of the operation for procidentia, by which the excess of vaginal tissue may be turned in, must be resorted to. With partial or complete laceration of the perineum, causing cystocele or rectocele, the appropriate operation on the vaginal wall will be necessary, as well as closure of the perineum.

So many causes exist by which a continued irritability of the bladder may be kept up until chronic cystitis has become established that it would be impossible to enumerate them at greater length. In the local treatment of the bladder the main dependence for relief rests in the frequent and proper manner of washing out the cavity. This operation the surgeon should perform himself if possible, using simply warm water in large quantities, to be injected with great care through a double catheter. After the injection, if the pain has been increased, it will be diminished greatly by a solution of morphine thrown into the bladder. Although the absorbing power of the bladder is very limited in a healthy state of the organ, yet in this condition it is sufficient; for such treatment is often more efficacious than the use of suppositories or anodyne injections into the rectum. When the injection of water can not be borne without increasing the irritation of the bladder, or when there has been no marked improvement in the case after a reasonable time, the operation for establishing a fistula must be resorted to. The patient should at least be given the option, with a reasonable expectation of success on the one hand, or on the other inevitable death from disease of the kidneys; and the surgeon fails to perform his duty who does not present the case to the patient in this light. Unfortunately the disease is so insidious in its character that either relief is not sought until the condition of the bladder has become complicated, or the patient can not realize the danger with the necessity of resorting to any surgical procedure.

In the beginning, from the profuse local secretion with phosphatic urine, an accumulation of mucus takes place in the bladder. At first the urine is to a great extent evacuated, but in time the frequent efforts to force out the mucus induce inflammation and thickening at the neck of the bladder. As a consequence, a certain amount of stale urine is always retained, thus increasing the irritation of the bladder, until at length its parietes become thickened, its mucous membrane ulcerated, infiltration of urine to some extent occurs, abscesses form, and pelvic cellulitis is often occasioned. Long ere this the œdematous and thickened condition of the tissues has so far obstructed the mouths of the ureters that the urine can no longer enter the bladder freely. The ureters often become enormously distended, the inflammation from the bladder extends along them to the kidneys, these organs at length become disorganized from pressure by the accumulation of urine, and death ultimately results from uræmic poisoning. Before the last stage of the disease has been reached, the poor woman has experienced, through a series of years, an amount of suffering both of body and mind unequaled, I believe, by any other infirmity to which our humanity is subject. To alleviate this suffering these patients soon become addicted to the use of opium in some form, and the degree of tolerance of this drug which has come under my observation is almost incredible. I had a patient at one time suffering from chronic cystitis who had frequently taken ten grains of morphine at a dose; and she informed me that sometimes within the twenty-four hours half this quantity had to be taken, in addition, before her suffering could be palliated. I have frequently noticed a tendency to a mucous diarrhea, which could alone be attributed to the excessive use of this drug, and with the frequent desire to evacuate the bowels the condition of the bladder became greatly aggravated.

The operation, as practiced for the relief of cystitis, is in itself a simple one; and if resorted to before the disease has advanced so far as to involve the kidneys, is as free from risk as any in minor surgery. Even under the more unfavorable circumstances the risk of the operation is justifiable; life may be prolonged, and a great degree of comfort obtained, in allaying the persistent efforts to empty the bladder.

To the effects of the anæsthetic I attribute the chief danger attending the operation in the advanced stages of the disease, while from the irritable state of the bladder its use is indispensable. As the kidneys are barely able to perform their function sufficiently well to preserve life, the balance is easily lost in the attempt at elimination, and death from uræmia rapidly takes place. It has been denied that the kidneys take any active part in the elimination of ether from the blood, but I am convinced that this view is incorrect. I have often detected the smell of ether in my own urine hours after I had performed some prolonged operation, where it had been administered to the patient. I have had no experience with the use of any other anæsthetic in this condition, but on theoretical grounds would consider the use of the nitrous oxide gas as the least objectionable, and particularly as the operation is one of so short duration. Unfortunately we can not judge in any case of long standing as to the actual condition of the kidneys, so that the consequences which may follow must be fully appreciated both by the operator and the patient.

Many objections have recently been made to surgical interference in these cases of chronic cystitis. While the chief danger in relation to the state of the kidneys has been entirely overlooked, the exceptions taken have been based entirely on theoretical grounds, with really no foundation in practice. We are all aware that most plausible objections may be made against any operation in surgery, and that the most simple in character is not free from danger under all circumstances. This operation may be regarded as an innovation, but experience has long since taught that it is founded on correct principles. The advance which will be made in the future will be an appreciation of the necessity for an early resort to its performance, before delay has placed a comparatively simple condition beyond the scope of any remedial means yet known to the profession.

In my work on Vesico-vaginal Fistula I describe the mode of operating on page 43, and give the history of a case where the same operation was performed for the removal of a stone from the bladder. An anæsthetic was administered, the patient placed on the left side, and Sims's speculum introduced. Then "a sound, somewhat abruptly curved an inch and a half from its extremity, was introduced through the urethra. While held by an assistant, with its point firmly pressing in the median line against the base of the bladder, a little behind the neck, the projecting tissue on the vaginal surface was seized with a tenaculum, and divided by a pair of scissors directly on the point of the sound until it could be passed through into the vagina. With the sound remaining in the opening as a guide, one limb of a pair of scissors was passed alongside into the bladder, and the vesico-vaginal septum divided backward in the median line. By this mode, especially where the vagina is of the natural size, the operation is extremely simple, and is completed in a few minutes. The object in cutting on the point of the sound is to be sure that the bladder and the vaginal surface are divided in correspondence, for there is so much mobility of one surface over the other that it is exceedingly difficult to enter the bladder unless the parts are transfixed. I have frequently closed the opening immediately after removing a stone, as in the operation for fistula, with the same after-treatment. In this case, however, I determined to leave it open a year for the relief of the chronic cystitis, as the bladder would thus be kept empty, and the chief source of irritation consequently removed; by remaining at rest it would gradually recover its tone." "I directed that the bladder should be washed out several times a day with large injections of warm water, slightly acidulated by adding a few drops of nitric acid, as the most direct way of correcting the alkaline state of the urine, due to the condition of the bladder itself. After three months' treatment the patient had improved so much, and was so anxious to return home, that on the 20th of June I reluctantly closed the fistulous opening, using eight sutures, which were removed on the following day. July 20, 1866, she returned home apparently cured of the cystitis, and able to retain her urine without difficulty during the night. It remains to be seen whether the opening was closed too soon, for with a recurrence of the inflammation the calculus will form anew."

This woman was well some months after leaving the hospital, and promised to return at once in case of any recurrence of irritation of the bladder. As she has not done so, I am fully satisfied that she has remained well.

The mode of operating, as described, can be but little improved upon from its simplicity. The median line has been preferred for the direction of the incision, as for all practical purposes the course is free from blood-vessels of any magnitude, without the opening be extended too near the cervix or to the neck of the bladder.

Dr. Bozeman, in the paper already referred to, describes his method of operating as follows: "To give them free vent (the morbid products constantly accumulating), an aperture the size of *half a dollar* is made into the bladder through the vesico-vaginal septum, just above the vesico-urethral orifice. When the patient is placed in the knee-chest position, and my self-retaining speculum introduced, the operation is done without an assistant, and with the greatest dispatch. A pointed knife with a narrow blade, a curved scissors, and delicate tenaculum suffice. First pierce the septum at the point indicated, then cut right and left at least half an inch each way. With the scissors the operation is easily completed, and then the extent of muscular hypertrophy may be ascertained, as well as the condition of the vesical mucous membrane."

The base proper of the bladder may be represented as a triangle, the mouths of the ureters being situate at each extremity of the base, and the vesico-urethral orifice at the apex. This triangular space maps out the surface where the bladder and vagina are in the closest contact, being connected elsewhere by loose cellular tissue. Just outside of the line of the ureters, in the sulcus on each side, run the large blood-vessels to and from the lower portion of the uterus and neighborhood. I have made a number of post-mortem examinations of the healthy bladder, both *in situ* and after the removal of the pelvic organs *en masse.* In no instance have I found the distance from the mouth of one ureter to the other, or from either to the orifice of the urethra, greater than an inch, these forming a triangle of equal sides. When disease has existed, and the bladder been long contracted, the distance between these points in all probability would be somewhat lessened. The diameter of half a dollar is one inch and an eighth, while a circle including three points, as I have described, at an inch apart, would have a diameter of a little less than an inch and two eighths. It is very evident therefore that in less skillful hands there would be some danger of removing the mouths of both ureters, together with a portion of the neck of the bladder, and no little risk, at the same time, of cutting into the large blood-vessels laterally, running along the vagina, outside of the bladder.

It is true that in the position recommended the vagina, by the weight of the uterus and by atmospheric pressure, would be fully dilated, and at the same time the distance between the line of vessels would be greatly increased, but no influence could be brought to bear which would increase the distances between the three given points within the bladder. It is true also that in the formation of a fistula, after parturition, we often find as large a slough thrown off from the septum, and the opening resulting remains even much larger than the one proposed by Dr. Bozeman; but the neighboring tissues for some distance beyond the margin of the slough become blended together by inflammation before its separation, and the fistula is afterward increased or diminished in size, as tension may be exerted by the contraction of these tissues.

In theory, there can be no necessity for an opening larger than that which would equal the capacity of the ureters, that the bladder may be thus kept empty. In practice, however, the incision is made larger at first than this indication would call for, from the fact that, with all the care that can be taken to prevent it, the greater portion will close too soon; and at first it is a great advantage to have so free an opening through which the accumulated mucus in the bladder may be freely washed out. The plan of cutting out a small piece is a good one, as the opening can then never entirely close of itself; but to do so would be evidently attended with more risk than the simple incision, even in the hands of an experienced operator.

Various means have been resorted to for the purpose of keeping the artificial opening patulous. In several cases I have used with advantage a hollow glass stud, made from tubing half an inch in diameter, and not unlike a spool in shape, which is buttoned into the slit. The portion of the rim to remain within the bladder requires to be but little more than a slight flare, with the edge turned over, to keep the instrument *in situ;* while the vaginal rim may be larger, to prevent its slipping into the bladder. It will remain loose, with sufficient play to prevent the parts from healing up too tightly around; and for its removal only a pair of forceps is necessary, by which one side may be turned up for the other to escape. I have always made them myself, of the best quality of glass, and have had them remain for weeks undisturbed; yet in some instances, when they have been longer than the thickness of the vaginal septum, a great deal of irritation has resulted. As a rule, I think it advisable at first to rely upon the careful introduction of the finger; but after a few days, when the irritation of the parts has somewhat subsided, and the incision begins rapidly to close, the glass stud may be used with great advantage.

I will now briefly give the history and treatment of several cases in detail, with the view of illustrating some of the difficulties and complications attending. In making the selection I have intentionally presented some of the cases with which I have had the most difficulty, wishing rather to give prominence to the dangers than to mislead.

I have operated by this method during the past ten years, in hospital and private practice, in some ten or twelve cases of chronic cystitis due to disease of the bladder itself. The number is too small to be of any statistical value, since I have never been able to ascertain the subsequent condition of several patients after their discharge from the hospital; and having no complete records of those treated in private practice, I do not wish to trust to my recollection. It is sufficient for all practical purposes, however, to state that I have been able to keep several cases under observation for a number of years after closing the fistula, and that there has been no return of the cystitis, where death would have resulted long since had this mode of treatment not been resorted to. Experience has certainly taught that while the operation may palliate at any stage of the disease, the benefit, as I have already stated, will be in ratio to the time of performing it.

Mrs. Ann Kelley was admitted into the Woman's Hospital on May 13, 1870. This patient had been in the hospital some time ten years before, and had been operated on by Dr. Sims for the closure of a large vesico-vaginal fistula, by which the cervix uteri had been turned into the bladder. She had remained well until eight years after her discharge, when irritation of the bladder set in, and rapidly increased. Her condition was a miserable one at the time of admission, and it was impossible to make a thorough examination. It was ascertained by means of the endoscope that the mucous membrane of the bladder was ulcerated. Local applications were made by means of this instrument, and the bladder was washed out from time to time, but with great suffering. As she received no benefit from local treatment, an anæsthetic was administered, and after a careful examination an encysted stone was detected. An incision was at once made through the vesico-vaginal septum, and with some difficulty the calculus, as large as a hazel-nut, was turned out of its bed in the posterior wall of the bladder. It was composed entirely of phosphate of lime. The mucous membrane of the bladder was found lost to a great extent, each denuded portion covered with a phosphatic deposit, and some thickening of the walls of the bladder existed. The bladder was washed out every day thoroughly, by placing the patient on the back with a bed-pan under her hips. Two fingers of the left hand pressed back the perineum as they were inserted into the fistulous opening to separate its edges, while the warm water in large quantities was carefully thrown into the bladder by means of a Davison's syringe held in the other hand, the smaller nozzle of the instrument being introduced either through the urethra or directly into the opening. Afterward the point of a sound was drawn along the angles of the opening to retard its closure. The edges of the incision healed rapidly, and the patient was in a condition to return home June 20th, with the urine freely escaping through the artificial opening. She was reädmitted to the hospital October 8, 1870. As the fistula had to a great extent closed, and the patient, as she improved, had neglected somewhat to use the injections, it was decided that the bladder should be washed out daily, with extra care, through a double catheter.

November 15th, the bladder being apparently in a healthy condition, its closure was determined upon. The opening was not larger than a pin's point, and situated near the neck of the bladder. It was closed with six sutures, and at the same time a mass of loose tissue at the neck of the bladder was turned in, as in the operation for cystocele, for fear that if left it might prove a source of irritation to the urethra.

November 25th, the sutures were removed, and the operation proved successful. The patient was discharged cured December 12, 1870, and she has remained well to the present time.

This case was of no particular interest, but to illustrate the rapidity with which recovery from chronic cystitis due to a stone in the bladder takes place.

Mrs. Mary B., aged twenty-four, was admitted to the hospital October 17, 1868, from Goshen, N. Y., with a vesico-vaginal fistula of four months' standing, after a labor of thirty hours. There had been a loss of two thirds of the lower portion of the base of the bladder, extending from one ramus to the other, without involving the urethra. In consequence of contraction of cicatricial tissue along the lateral walls of the vagina, the canal had become shortened, and the opening was drawn into the shape of a parallelogram. The fistula was closed, November 7th, with thirteen interrupted sutures, by Dr. John G. Perry, assistant surgeon to the hospital, the operation being a very difficult one, owing to the peculiar shape of the fistula. The sutures were removed on the tenth day, and the union throughout the line was perfect, notwithstanding that great traction existed.

December 18th, Dr. Perry operated again, to close several small openings in the line, which had been produced by the great strain on the parts. This operation proved nearly successful, leaving but one small opening at the extreme end of the line, to the left, near the cervix. The patient returned home, but was reädmitted February 15th, when it was found that this small opening had increased to nearly an inch in length. I closed it myself March 6th, using seventeen sutures. On bringing the edges of the fistula together a pucker was formed at each end, so that it was necessary to extend the denuded surface for some distance on the vaginal surface before the folds became reduced to the common vaginal level. The sutures were removed March 26th, and the patient was discharged cured March 31, 1869.

A few weeks after her discharge she began to suffer from some irritation of the bladder. This increased by degrees, and occasionally the urine was mixed with blood. She became pregnant, and was delivered with forceps February 14, 1870. Gradually the difficulty with the bladder became greater, and she was again admitted to the hospital March 31, 1871, suffering fearfully from chronic cystitis. It was with the greatest difficulty and suffering that a double catheter could be introduced for the purpose of washing out the bladder, and at length so much so that it became necessary to administer an anæsthetic every other day in order to effect it properly. As but little improvement had taken place April 21st, I made a transverse opening just beyond the neck of the bladder, an inch in length, and somewhat crescentic in shape. This was done in consequence of the great loss of tissue, there being not room enough between the cervix and neck of the bladder to make the incision in the axis of the vagina. When the finger was passed into the bladder, its walls were found greatly thickened, the mucous membrane destroyed to a great extent, and coated with the most offensive phosphatic deposit, which when removed caused bleeding from the surface below. Her sufferings were so great, even after the operation, that it was still necessary to give her an anæsthetic every other day before washing out the bladder, and often a gallon of warm water was used at a time before the deposit could be removed. A week after the operation I introduced a glass stud into the opening to keep it from closing. This treatment (by injection) was continued daily until August 7th, when the glass instrument was removed, as it had begun to excoriate the posterior wall of the vagina. Her general health began to improve rapidly, and she was by this time free from pain, except when the bladder was syringed. When the finger was passed within the bladder, its surface was felt to have become smoother, but was still tender on pressure; yet the improvement had been very great. The injections were continued until October 1st, with half a drachm of carbolic acid to the pint of water. This had constituted the treatment, with the exception of the application of a weak solution of nitrate of silver to any denuded point which could be detected to lessen the phosphatic deposit. From some unexplained cause a sudden relapse occurred, with a chill and symptoms of pelvic inflammation, and her condition became apparently worse than before the operation. With fever, she suffered from pain over the hypogastrium; the urine became high-colored and filled with urates. It was unbearable to introduce the finger into the bladder through the opening, the edges of which had long since healed and ceased to be sensitive. Notwithstanding every care the whole vaginal surface became denuded of its mucous membrane from the irritating character of the urine, and coated with the phosphatic deposit. The labia inflamed, and became so sensitive that the slightest examination could not be made except under the influence of an anæsthetic. In a few days the urine was as offensive as if mixed with the contents of an old pelvic abscess. By degrees the vagina could be syringed out several times a day, and she was able to take hot sitz-baths. With anodynes, tonics, and other treatment, she was placed on ten drops of dilute nitric acid three times a day. As the irritation of the vagina lessened somewhat, its excoriated surface and the now raw edges of the fistula were touched every other day with a solution of nitrate of silver in spirits of nitric ether (forty grains to the ounce), and on drying the surface collodion was freely applied. She began now rapidly to improve, and the free use of the collodion proved of the greatest advantage, not only in protecting the parts from the urine, but also as a local anæsthetic.

November 14th, she had now gained so rapidly that the finger could be introduced into the bladder without causing pain, and there remained not the slightest vestige of the cystitis. I closed the fistula, using eight sutures; and in denuding removed the surrounding tissues freely, with some doubt as to the success of the operation in consequence of the cicatricial character of the edges, which had resulted from the frequent use of nitrate of silver. She was placed in bed, a small quantity of opium was ordered daily, with a light, nutritious diet. A sigmoid catheter was retained in the bladder, and only removed night and morning for the purpose of cleaning it. Her condition remained comfortable until the sixth day, when a small quantity of urine began to pass by the vagina.

November 22d, the sutures were removed, when it was found that a small opening existed near the center of the line where a suture had cut out, due, it was thought, to traction and low vitality of the parts. A catheter was retained in the bladder for several days longer, when the quantity of urine lost diminished greatly.

January 20, 1872. This patient has been retained under observation. She is entirely free from all trouble of the bladder, and is now in perfect health, having gained some twenty pounds in weight. The opening is now so small that when lying on the back she has retentive power. The bladder is never entirely emptied except through the urethra, so that if the cystitis was not cured there would long since have been evidence of it. The sound now can be passed into the bladder at any point within its cavity, and without causing the slightest pain or irritation. To close the little valvular opening would be but a trifling matter, and it has been deferred with the view of keeping her under observation.

Kate Smith, unmarried, aged twenty-seven, a native of Ireland, was admitted to the hospital June 10, 1868, from the city, with chronic cystitis.

She had been in good health until her emigration to this country in 1863, when she was attacked with small-pox three days after her arrival, and continued an invalid for eight months afterward. Her health slowly improved, but she never regained her previous strength, and had occasionally attacks of inflammatory rheumatism. In March, 1866, while attempting to carry a table, she tripped, and falling forward received a blow on the lower portion of the abdomen, from which she suffered great pain at the time. It diminished to a feeling of soreness, but lasted until the following June, when she took a cold bath, from which she got chilled. She was obliged to go to bed in consequence of sharp, shooting pains in the lower portion of the abdomen, accompanied with a frequent desire to empty the bladder. From this time her suffering continued; she was never free from irritation of the bladder, and at the time of her admission to the hospital her symptoms were all those of well-marked chronic cystitis. She was placed under a careful constitutional treatment; diluents and other agents were used to correct the condition of the urine, and the bladder was carefully washed out daily, but without in the slightest degree benefiting her condition. So great was her suffering that, July 1st, I decided to operate without further delay, and made the opening in the usual manner along the median line. The interior of the bladder was apparently a mass of granulations, and from some accidental cause the hemorrhage was so profuse from the cavity itself that it was necessary to inject a saturated solution of alum, and, this failing, a quantity of the persulphate of iron and water, before it could be arrested. On the fifth day, as in the previous case, the vagina became coated with a phosphatic deposit from the urine, and this condition added greatly to her suffering. The opening was kept from closing by passing the finger gently within, and at the same time the bladder and vagina were carefully washed out with warm water several times a day. On the tenth day after the operation symptoms of peritonitis were developed. She was at once brought thoroughly under the influence of morphine to semi-narcotism, and turpentine stupes were applied to the abdomen. As far as it was possible to do so in her condition, the bladder was daily washed out with hot water by the vagina. She was placed on five grains of quinine three times a day. Stimulants had to be resorted to, and finally increased to an ounce of whisky every half hour, with beef-tea, milk, and eggs freely.

July 20th, she was seen in consultation with Drs. George T. Elliot and George A. Peters, of the Consulting Board, when it was decided that the case was complicated with pelvic cellulitis. A large blister was applied to the lower portion of the abdomen, and five grains of iodide of potassium were ordered three times a day.

July 22d, her pulse averaged 131, respirations 12, and the bowels moved twice during the day, but were controlled by an opium enema.

July 24th, nine A. M., pulse 104, countenance good, tongue moist, and the tympanites diminished. She was placed again on quinine and brandy, and the iodide of potassium stopped. During the following night the bowels moved several times and with great pain, but they were held in check by an opium enema. The morphine was reduced to five drops of Magendie's solution every hour. She had been sweating profusely, but it was considered due to the large quantity of morphine that she had been taking.

July 25th, pulse 118, respirations 12, skin pleasant in temperature, with less sweating since reducing the quantity of morphine. With still a tendency to diarrhea, the tongue was moist but furred, and she now complained of feeling exhausted. The abdomen was decidedly less tender on pressure and the tympanites had diminished greatly. At noon the pulse suddenly reached 136, the skin became hot and the face flushed. The morphine was again ordered to be increased to ten drops of Magendie's solution every hour. During the day the bowels moved three times, and at six P. M. the pulse was still 136. The action of the bowels was checked by twenty-five drops of the acetated tincture of opium, with two drachms of tincture of kino in starch-water by injection into the rectum.

July 26th, pulse 120; the bowels had moved frequently during the night, and her sleep had been much disturbed by pain after each evacuation. Her tongue was moist, with but a slight increase in the temperature of the skin. There was but little change in her condition until August 8th, when she began to convalesce. She was put on a tonic, composed of iodide of potassium, iodide of iron, strychnine, and sulphate of quinine, which proved of great benefit.

September 1st, she began to walk about the ward, and the cystitis to improve.

October 15th, the patient had now regained her health in a great degree, and the fistula remained well open. The introduction of the catheter through the urethra, however, was still painful; the injections were therefore thrown into the bladder along the finger passed through the fistula, which allowed of its free escape.

January 24, 1869. The cystitis had now decidedly improved, and the catheter could be introduced by the urethra without pain, so that the daily injections were administered in this direction with a free escape by the vagina. The patient continued to gain in health and strength rapidly.

March 1st, the injections of warm water had been continued to date, and from time to time a weak solution of nitrate of silver had been applied to any denuded portion of the bladder which could be brought into view, and the solution of the persulphate of iron had been used for the same purpose. Her general health began now to suffer somewhat from her long confinement, with loss of appetite and strength. The cystitis, however, had steadily improved. In consequence of the inflammation of the mucous membrane of the vagina during her illness, the canal became constricted by a circular band just beyond the fistula, so that the extremity of the index finger could scarcely be admitted. The uterus had become partially retroverted and fixed from the attack of cellulitis, and to this was attributed the back-ache and pains about the hips of which she now complained. There had been a scanty menstrual show but twice during the previous summer. The cystitis had improved so much that it had only been necessary to wash out the bladder three times a week, but a small quantity of dilute nitric acid was still added to the injection.

June 1st, Dr. Newman made a careful examination of the bladder with the endoscope, and found no longer any remains of the disease. The fistula was closed, using eight sutures; they were removed on the tenth day, and the union was perfect. Ten days afterward, on sitting up, it was noticed that a portion of urine escaped, but by the urethra, as was found on examination.

June 29th, she began to complain of some irritation and pain in the urethra, which was attributed, as well as the loss of urine, to the long use of the catheter. By means of the endoscope a granular spot was discovered in the urethra, near the neck of the bladder, which was painful on pressure. To this a solution of nitrate of silver was applied.

July 18th, after three applications by Dr. Newman, this spot healed, and the retentive power was regained. She was discharged from the hospital on this day, cured apparently of all disease, and her general health in good condition, after having been daily under treatment for over a year.

Reädmitted November 6, 1869. Had remained well for several weeks after her discharge, when the pain returned in the urethra, with some irritation of the bladder if the urine was retained beyond a given time. Under Dr. Newman's care the granular point in the urethra was soon healed again. The irritation of the bladder was evidently due to the long-contracted condition of the organ, and had to be dilated before the urine in any great quantity could be retained. The bladder was gradually distended by injecting, day after day, a large quantity of water, which was retained for a short time before being passed. This patient was kept in the hospital under observation until June, 1870, during which time attention was directed to her uterine condition. She received no treatment for the bladder for six months previous to her discharge; the organ became fully dilated, and regained entirely its normal condition.

Mrs. Ellen O'Brien, aged thirty-five, was admitted to the Woman's Hospital November 8, 1867. Menstruated for the first time at sixteen years of age, with great pain, lasting from four to five days, and rather free in quantity. She married at seventeen, and gave birth to her only child within a year. Four months after marriage her husband died. She married again in 1864, and the second husband died a year afterward.

Her general health from childhood had been delicate.

Three years previous to admission she received a severe fall, and from that time she had never been free from irritability of the bladder. This gradually increased, until at length with constant pain she was obliged to empty the bladder at least every half hour during the night and day. The urine was sometimes clear, but generally of a dark, smoky color, with often some sediment, and frequently tinged with blood. She was found suffering from chronic cystitis, with some thickening of the walls of the bladder. The uterus was retroverted and fixed in position from some previous attack of cellulitis. The organ was normal in size, but the cervix was indurated and small, with "os" nearly closed. With injections into the bladder an attempt was made at the same time to correct, if possible, the position of the uterus, as the cervix was pressed upward against the base of the bladder and might prove a source of irritation. The finger, by the rectum and vagina, was the only means used to lift up the fundus, for fear of exciting the old pelvic inflammation. This was only partially successful; the cervix was blistered from time to time with the acetic solution of cantharides, with the view of lessening the induration, and sponge-tents were also carefully used for the same purpose, and to relieve the dysmenorrhea by opening the os. Great pains were taken to improve her general condition. With the view of acting on the bladder, she was placed at one time on a mixture containing ten grains of tannin to the dose; large doses of old muriated tincture of iron were used, from its containing more free acid than the fresh preparation, and I believe she at one time readily took a drachm three times a day. An infusion of the triticum repens was also freely given for some time.

March 10, 1868. In consequence of a slight exposure to cold she suffered from a severe attack of pelvic peritonitis, lost what little benefit had been gained by treatment, and was several months convalescing. At length, after nearly seven months' local treatment, having exhausted every local and constitutional resource with but little benefit, the operation was recommended. After fully explaining to the patient the risk of life, even in her debilitated condition, should the operation again light up the subacute pelvic inflammation, which still existed, she decided to submit to the operation with all its dangers in preference to remaining in her present condition.

June 2d, the patient was placed under the influence of ether, and with the concurrence of Drs. Alfred C. Post, one of the consulting surgeons, and H. P. Farnham, her former physician, the artificial opening was made. The incision was an inch and a half in length, extending from the neck of the bladder nearly to the cervix uteri. The interior of the bladder was found in the usual condition, with the walls thickened and corrugated, but with less ulceration of the mucous membrane, the latter condition being due probably to the length of time she had been under treatment.

June 23d, with the greatest difficulty the fistula had been kept open, but had now become so small that the finger could with the greatest difficulty be introduced.

July 18th, she was discharged, greatly improved both in her local and general condition, to return in the fall.

October 27, 1868, she was reädmitted to the hospital, having been under observation during the summer as an outdoor patient. Her general health had not improved to any great extent, and she had suffered greatly from the fistula, which twice nearly closed. The adhesions were broken down so as to admit the finger, and at length it remained permanently open, large enough to admit a No. 6 bougie, through which all the urine escaped. During the winter the regular treatment was kept up, with much improvement in the cystitis, and the walls of the bladder became softer. Much thickening, however, and induration at the neck of the bladder remained, with tenderness in the urethra, making it unbearable to introduce a catheter into the canal.

June 4, 1869. For several months past a solution of morphine, containing eight grains to the ounce, had been thrown into the bladder, after washing it out with warm water. This plan was followed with great benefit, so that there was decidedly less tenderness on pressure in every portion of the bladder, but she continued to complain whenever a catheter was introduced.

June 9th, a relapse occurred, apparently without cause, with a constant desire to empty the bladder, although the urine all escaped freely by the vagina. Dr. Newman kindly examined the bladder for me with the endoscope. Its mucous membrane was found to be now in a normal condition. As the instrument was slowly introduced into the urethra every portion of the canal was carefully inspected. At first nothing could be found, but at length a minute granular point was detected on the left side, about half an inch from the orifice, intensely red, and painful to touch. Churchill's solution of iodine was applied, giving much pain, which lasted eight hours.

June 16th, the patient was again examined, and it was found that no improvement had taken place. The iodine application was repeated, with less pain than after the previous examination.

June 21st, a weak solution of nitrate of silver was applied to the ulcerated point, and repeated on the 24th and 28th inst. The patient complained a great deal of pain after each application, but the surface gradually healed. She remained in the hospital during the summer without further treatment beyond the injection of water into the bladder. In December the fistula was closed; but on removing the sutures it was found that no union had taken place, in consequence of the cicatricial character of its edges, resulting from the frequent application of the nitrate of silver. As her general health was still poor, the fistula was not again closed until May 31, 1870; seven sutures used, after removing with a pair of scissors the vaginal tissue around the edges of the opening.

June 9, 1870, the sutures were removed, and the edges were found firmly united. She was discharged cured July 18th, having been two years and some eight months under daily observation and treatment. After her discharge her general health improved without any further trouble with the bladder. She continued well, and on inquiring to ascertain her present condition, I learn that within a short time she has returned to Ireland.

I have had but one death follow the operation, the history of which is given in my work on Vesico-vaginal Fistula, page 237. "Case LXXIV—Cystitis resulting from cold, of eighteen years' duration, followed by a pelvic abscess, which soon afterward opened into the bladder and vagina. Fifteen months previous to admission incontinence of urine suddenly took place, with partial relief of the cystitis afterward. The vesico-vaginal sinus was enlarged, so as to allow of the free escape of urine. Death from uræmia forty-eight hours after the operation." The post-mortem examination showed the existence of chronic tuberculous peritonitis, the left kidney was enlarged, and sufficiently dilated to contain three or four ounces of fluid, and the ureter on that side was also greatly dilated. The right kidney had been entirely destroyed by tuberculous deposit, which had undergone cheesy degeneration, leaving scarcely a trace of the kidney structure. Her death was due to the effect of ether, by which the diseased kidney became congested above the secreting point.

With the exception of a patient who suffered from an attack of peritonitis, due to accidental exposure a week or more after the operation, I have met with but little difficulty in the after-treatment of other cases, and therefore have thought it unnecessary to extend this paper to a greater length.

NEW YORK.

TRAUMATIC TETANUS TREATED WITH CHLORAL HYDRATE AND ELECTRICITY.

BY HAMILTON GRIFFIN, M. D.

On the 19th of July I was called to see Margaret Johnson, aged twenty-one years, mulatto, occupation laundress, constitution very robust; found her suffering from frightful tetanic spasms, with complete opisthotonus; the jaw firmly locked, the muscles about the jaw perfectly rigid, with risus sardonicus. These spasms occurred every ten minutes. During the interval the patient was enabled to open the mouth far enough to allow a tea-spoon to be inserted between the teeth, but the abdominal muscles were corded and painful. She also complained of severe pain at the ensiform cartilage. Ordered chloroform to be administered by inhalation.

Inquiry elicited the following history: On the 18th day of June she stepped upon a piece of glass, which inflicted an incised wound about three fourths of an inch in length, and about the same in depth, on the inner side of the plantar surface of the left foot. This wound suppurated, and continued painful until July 10th, when Dr. W. T. Owen was called to see her, and found her jaw stiff; tonic spasms extending to neck, abdomen, and back. During the spasms all the muscles in these regions were involved. There occurred risus sardonicus. The muscles most firmly contracted were the sterno-mastoid, rectus abdominalis, and obliquus internus. There was no febrile disturbance, but she complained constantly of pain at the ensiform cartilage and in the right inguinal region. Dr. Owen ordered her to take one half grain of calabar-bean every half hour until she had taken four grains. This treatment produced no effect. He then ordered twenty-grain doses of chloral hydrate every four hours while awake.

This treatment, with flaxseed and opium poultices to the wound, produced muscular relaxation and relief of pain.

July 17th, Dr. Owen discharged the patient for disobedience of orders and neglecting to take her medicine.

July 20th, having heard from Dr. Owen of the beneficial results which followed the use of chloral, I ordered fifteen grains, combined with one fourth grain muriate of morphine, every four hours; chloroform inhalations to be used during spasm.

July 20th, six P. M., pulse and temperature remain normal; spasms occur every six hours; muscles slightly relaxed, but opisthotonus complete during paroxysm.

July 21st, called in Prof. J. W. Holland, who applied the continuous galvanic current by means of Stohrer's battery. The current produced muscular relaxation and relief from pain in fifteen minutes.

July 22d, pulse and temperature normal; no spasms since last visit; pain as before; mouth opened one fourth inch with great difficulty. The chloral, morphine, and galvanism were continued for several days, when the patient was discharged cured.

I have seen during the last fifteen years thirteen other cases of traumatic tetanus, all of which proved fatal; but in every case the tetanic symptoms came on in a few days after the reception of the wound, and were violently acute from the commencement. The difference between the case in this report and the fatal cases is that tetanus did not make its appearance until twenty-two days after the reception of the injury, and then it began in a mild form; no opisthotonus being observed until nine days after the tetanic symptoms occurred. It is my opinion, based on a study of these cases, that where tetanus comes on in a short time after the reception of an injury, where it assumes a violent and acute form, the patient will die in almost every instance. Where tetanic symptoms are delayed a considerable time, and on appearance are of a mild or subacute form, the patient will almost invariably recover.*

[In respect of the galvanic treatment of muscular spasms, this case is worthy of some comment. On July 21st an active current from sixteen Stohrer's cups was passed directly through the muscles which close the jaw, with no advantage. The positive electrode was then placed upon the infraorbital nerves, and the negative changed about among the masseters and temporals of the two sides. The only effect was to relieve some pain just anterior to the ear. The antagonist muscles were next excited, in the hope that the experience of Dr. Mendel † in tetanus would be repeated; still the jaw did not yield. As the patient made great complaint of the epigastric pain, the phrenic nerve was brought under the electrical influence. The negative electrode was pressed firmly upon the integument behind the sterno-mastoid muscle, and the positive was directed to the top of the ensiform cartilage. Relief from the spasm of the diaphragm was immediate, the distress disappeared, and the rigid sterno-mastoid became relaxed. When the positive pole was applied upon the neck behind the angle of the jaw, the negative being retained in its position several inches below, still more marked benefit was had. The grin vanished, and after an application in this position, lasting six minutes, the teeth could be separated nearly half an inch.

July 22d, it was found that the neck had retained its suppleness, though there was some epigastric pain, and the jaw could be depressed only a quarter of an inch. The general condition was much improved. The same current was used in the manner suggested by the previous day's experience, with fine effect. The pain was dismissed completely, and the jaw was unlocked nearly an inch. The rectus and internal oblique of the abdomen were treated by the constant current for ten minutes, and thereby were loosed from their tonic contractions. A few days' galvanization was resorted to, and always with notable softening of the spasms steadily progressing to a complete restoration to health.—J. W. H.]

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* See this journal for August, 1870.

† Quoted in Althaus's Medical Electricity.

LOUISVILLE.

SPASM OF ACCOMMODATION.

BY J. THOMPSON, M. D.

Donders and Wells each state that *spasm of accommodation* is of rare occurrence. The former found it more frequently in myopic patients, the latter as a complication in hypermetropia. Stellwag refers to it as "one of the darkest chapters in ophthalmology, because a sufficient number of carefully studied cases has not yet been observed." Comparatively rare as this disorder may be in Europe, this we must believe, from the statements of the celebrated authorities above mentioned, it is frequently seen in this country. In support of this assertion I could report at least forty well-defined cases which would bear the most rigid criticism. Many of these were under the charge of Prof. E. Williams, of Cincinnati, whose evidence would corroborate my statements. Possibly the peculiar nervous temperament of the people of this country, consequent upon speculative or political excitement, the anxious and hurried struggles for wealth, for place, or for power, may be the most important factor in the production of this derangement, so much more frequent here than in the old world.

Complete as my case-book is with all the symptoms connected with the many cases of spasm of accommodation that I have observed, yet a full report of all would occupy too much space in the Practitioner, and I will therefore adduce but three of these cases, reporting them as briefly as possible.

Case I. S. B., aged nineteen, student, November, 1870, complained of "aching in the front part of his head, and a drawing sensation in and across both eyes; has much difficulty at times in reading, and distant vision is also very poor: has worn spectacles (concave, 24s) for nearly two years for walking."

On examination he was found to be myopic, and with his glasses vision equaled $\frac{15}{20}$ for a few moments. The letters then became indistinct, when upon the addition of —30s to his —24s he could again read No. 20 of Snellen's test-type. Spasm of the ciliary muscle was the diagnosis, and he was ordered to apply a few drops of a four-grain solution of atropine to his eyes three times a day, and to report again in two days.

November 4th, pupils well dilated, $S=\frac{15}{20}$ with —30s (vision equaled $\frac{15}{20}$ with concave spherical No. 30); but in a few moments everything became blurred, and again improved with stronger glasses, which convinced one that the spasm was only partially relaxed. To continue atropine.

November 6th, $S=\frac{15}{20}$ with —36; continue atropine.

November 8th, $S=1$ with —48; continue atropine.

November 10th, $S=\frac{15}{12}$ with —60. He then discontinued the atropine until February 27, 1871, when he was found to be in exactly the same condition as when first seen; or, in other words, the spasm had been relaxed by the medicine, but returned soon after its discontinuance. He was then ordered to use the atropine twice a day for one month.

March 23d, 1871, $S=\frac{15}{12}$ with —72s. He then returned to his home in Illinois, and has not been heard from since.

Case II. J. W. B., aged twenty, brass-finisher, Cincinnati. December 12, 1870, he complained in a very similar manner to the one just mentioned, and we found that with —24 his vision also $=\frac{15}{20}$; but, as in the other case, the letters soon became indistinct, and were again brought out with an additional concave lens. He was subjected to the same treatment as the foregoing case.

December 13th, pupils widely dilated, and upon testing his vision we found that a latent hypermetropia complicated his case, which at this date appeared to be about $\frac{1}{24}$ in his right and about $\frac{1}{16}$ in his left eye; but, as evidences of spasm were still manifest, he was ordered to use the atropine three times a day for a few days longer.

December 17th, with the unaided eye his vision $=\frac{15}{200}$, but with $+7$s S$=1$ in right eye, and with $+5\frac{1}{2}$ S$=1$ in left eye.

Case III. J. K. L., aged about twenty-eight, jeweler, of Louisville, Ky., presented himself, January 25, 1871, with all the symptoms of asthenopia, and feared he was troubled with amaurosis. He also was wearing concave 24s, and with them his vision $=\frac{15}{20}$; but, as in the preceding cases, the blurring of the letters quickly prevented him from reading more than one or at most two letters, unless aided with stronger glasses. Atropine was ordered three times a day.

January 27th, spasm not yet relaxed, and as he had pressing business he was suffered to return home, and ordered to use the atropine twice a day for three weeks.

February 10th, S$=1$ with 48s⊂⊃24c; axis 95° left eye, and S$=1$ with 42s⊂⊃36c, axis 90°; or, in other words, the myopia had entirely disappeared, and he was found to labor under a hypermetropia of $\frac{1}{42}$ + hypermetropic astigmatism, $\frac{1}{36}$ in the horizontal meridian of his right eye, and H $\frac{1}{48}$ + A H $\frac{1}{24}$ in the left eye. Glasses were ordered to be ground with spherical and cylindrical surfaces, with their axes as above indicated, after which he pursued his daily avocation with greater comfort.

The above are simply samples (if you allow the term) of the cases which fell under my notice; but in addition to the above, and besides meeting the anomaly in cases of myopia, hypermetropia, and hypermetropic astigmatism, I have witnessed it in simple, myopic, and in mixed astigmatism, and in some instances where no absolute anomaly of refraction existed at all.

Donders, of Utrecht, reports a case which occurred in a patient of his, who resided in the East Indies, who was myopic, and in whom the atropine had to be kept up for six months before the disease permanently gave way.

Spasm of the ciliary muscle frequently follows blows upon the face, especially in those parts supplied by the upper divisions of the trigemini. I also remember a case which occurred in a professor in Lane Seminary, where it was connected with blepharospasm, which was brought on from an abscess from the root of a carious tooth. Girls at puberty and spinsters are quite subject to it.

Another anomaly (of the anomaly) which I have never seen described or even mentioned in connection with or as a complication of this anomaly, and which I have several times witnessed in spasm of the ciliary muscle, is *mydriasis*, or a widely dilated pupil. It may occur in one eye on one day, and in the other on the following day; but usually no sooner is one dilated than the other becomes contracted, and this alternation sometimes takes place several times during the course of a single day.

Permit me to suggest a theory in explanation of the above. It will be remembered that the ciliary muscle and iris are supplied from the fifth, third, and sympathetic. The third is supposed to supply the anular fibers of the iris, while the radiating ones are supposed to receive their supply from the sympathetic; the third is supposed to contract, while the sympathetic is supposed to dilate the pupil. Now, let us remember the intimate relation which exists between these nerves through the lenticular ganglion, then we can readily see how an irritation of the periphery of either nerve may cause the anomalies in question. The primary irritation may be on the fifth, and its force may be felt upon the third, and contraction result; then it may pass to the sympathetic partially, and dilatation take place. This irritation may be started in the course of the alimentary canal or uterus, or in other organs, and this train of symptoms or exactly opposite ones may be set up. I simply give the facts, however, and leave theories to the reader.

Treatment. It will immediately be suggested that the cause should be removed. We can not always do this. If we suspect disorder of the uterus or of the ovaries, or any of the reproductive organs or intestinal entozoa, or anything which falls under the domain of the gynecologist or general practitioner, they should be consulted. (Practically, the field in which the oculist should operate is fortunately remote from the vagina.) If the trouble depends on an anomaly of refraction, it should be neutralized by the proper optical aids, but of themselves they are not sufficient. We should keep the ciliary muscle well relaxed with some of the mydriatics for weeks or months, always carefully avoiding atropinization.

INDIANAPOLIS.

Reviews.

Essentials of the Principles and Practice of Medicine: A Hand-book for Students and Practitioners. By Henry Hartshorne, A. M., M. D., Professor of Hygiene in the University of Pennsylvania, etc. Third edition, thoroughly revised. Philadelphia: Henry C. Lea. 1871.

This work is a mirror of the daily practice of a sound, conservative, judicious, and experienced physician. Though every practitioner who reads it may take issue with the author on points here and there, we know of no work that more completely represents the present prevailing therapeutics in America. It is really a very remarkable volume. Marvelously condensed, and yet unimpaired by the condensation, we have in less than four hundred and fifty octavo pages the essentials of the principles and practice of medicine. While the views and discoveries of others are cited wherever instructive, the work is singularly original, being made up of the experience of the author. Though now in its third edition, and already well and favorably known, we propose to give a somewhat extended analysis of its contents.

"Experience rather than reason" is Dr. Hartshorne's motto. He considers that Trousseau only slightly overstated the fact when he said, "*Rationalism in medicine leads only to absurdities.*" He holds that physiology and pathology are yet in their infancy; that we can not at present construct therapeutics on the basis of scientific medicine; that while physiology is in its present imperfect state, scientific empiricism is the most rational practice attainable; that our great want is more *positivism* in medicine, more *exact observation* of clinical and therapeutical facts, more fact and less theory; that the two blades of the scissors of practical medicine are diagnosis and clinical proof; that total ignorance of the modus operandi of any agent does not interfere with its availability in the treatment of disease. We do not know, for example, why bitters improve the appetite, why iodide of potassium cures syphilitic rheumatism and quinine intermittent fever, or why opium produces sleep. After alluding to the fact that almost all our medical treasures were discovered by accident, he goes on to say that it is the physician's duty to make empirical observation scientific by acccurate comparison of the different modes of treatment, and by appreciating and analyzing the conditions and circumstances modifying the action of medicines and of diseases. He believes that our present incomplete physiology may suggest safe and proper experimentation, and he looks for a time when the how and the why of therapeutics may be largely and accurately explained.

In a few pages we have laid before us a succinct yet ample view of the more essential phases and mutations of past and present medical opinion, a curious and profitable study. The "rational treatment" of the present day, as it is denominated, the recognizing that most diseases are self-limited, doing nothing if we are not clear that we can do good; trusting to nature, or merely assisting her when we have no specifics—a practice with which the names of Dr. Bigelow and Sir John Forbes are so eminently connected—was taught, says Dr. Hartshorne, or at least recognized, by Hippocrates and Asclepiades, and by Sydenham and others of a later day.

The remarks on tubercle are in accord with the prevailing views of the present day. Dr. Hartshorne thinks that Villemein's hypothesis of specific tubercular inoculation is disposed of by the experiments of Lebert, Wyss, Saunderson, and Fox. With Rokitansky, he believes in the general incompatibilities of tubercle with cancer, typhus, ague, and bronchocele, but regards these incompatibilities as only general. Now, as to cancer and tubercle, it is contended by some that they are intimately connected, and for our part we are sure that tuberculous affections especially abound in malarious regions, and that it is not uncommon to have the two diseases coëxisting in the same patient.

Fatal pulmonary phthisis, says Dr. Hartshorne, may occur in the following ways: 1. And most frequently as a progressive degeneration of the lungs, with intercurrent and successive attacks of inflammation, which hasten the fatal termination; 2. As a tubercular or caseous pneumonia, subacute or chronic, but sometimes so rapid as to be called acute phthisis or galloping consumption; 3. As a simple, slowly progressing cachectic, degenerative disease, constitutional depravation and pulmonary disorganization going on together, and death occurring, sometimes from general vital decline, and sometimes from pulmonary obstruction or debility.

Dr. Hartshorne mentions that he has seen three cases of pulsation of the jugular veins, not dependent upon heart disorder, but due to *local irritation* exaggerating the muscular activity resident in the organic muscle-fibers of the vein. These are interesting facts, and contrary to the received teachings on the subject. He has by no means lost entire faith in bleeding, leeching, cupping, etc., and evidently has a decided contempt for "blood-fearers," as he calls them. From Hippocrates down to the present time the aggregate testimony of the profession has been in favor of local and general blood-letting in violent inflammations and congestions, although in our day, he confesses, bleeding has more opponents and fewer defenders than at any period in medical history. This result he attributes to, first, the reäction from former abuse of the remedy; second, a change in the average human constitution; third, false construction and misapplication of recent science; fourth, leadership and fashion. This reäction, he thinks, has gone to extremes.

In all these propositions, save change in constitution, we are inclined to coincide; but we do not believe the *vis vitæ* in man is one whit less now than it was in previous ages; and although the dwellers in cities probably do degenerate, from generation to generation, in avoirdupois, yet the life-force is not diminished. During four years' service in the Confederate army, we became satisfied, from abundant and careful observation and comparison, that the doctrine taught time out of mind in the books, that the inhabitants of cities were inferior in vital power to rustics, was an error. We are confident, and we believe the experience of medical men both in the late war and in the Mexican war will sustain us, that the little men of the cities bear active medication, loss of blood, physical suffering, fatigue, and all hardships much better than the big people of the rural districts.

In high grades of inflammation, as a rule, though not invariably, Dr. Hartshorne advises non-stimulant diet, and gives slops. We conceive that it is seldom necessary to give food in the beginning of acute inflammatory diseases. In such cases anorexia usually exists, and a few days' rest to the stomach may remove this. When, however, it becomes necessary to feed sick people, we give them strong and nutritious food, regarding farina, tapioca, sago, and all of that ilk as worse than useless, and only fit for the stomachs of the vigorous and healthy. At the same time, should a patient crave any of these farinaceæ, or indeed any other food, we should yield to his desires, believing that nature speaks through the invalid's stomach, and is far less fallible than the wisest doctor's judgment. Fruits and cold water, we are glad to know, Dr. Hartshorne considers not only harmless, but positively beneficial in sickness. Tartar-emetic, in inflammations of the lungs, pleura, and bronchial tubes, he holds to be the most useful medicine yet discovered. We are satisfied, on the contrary, that there would be more lungs now in use had antimony never been employed by physicians in pneumonitis, pleuritis, bronchitis, etc.; and by far the most serious objection to this most excellent treatise is its repeated and emphatic recommendation of phlebotomy and antimony and purging and blisters, and other so-called antiphlogistic agents. We are convinced that our author here leans too far back toward the past, and that statistics and the great mass of professional experience are against him.

Mercury he considers of demonstrated curative power in the phlegmasiæ. He teaches that mercury is a general stimulant to all the functions of organic life which are performed under innervation from the ganglia of the sympathetic system. It diffuses, he thinks, and equalizes the secretions and the circulation of the blood, helping thus to destroy local congestion and inflammation. Mercury, he has no doubt, acts upon the liver; and in jaundice, "biliousness," and sick-headache he deems it of unequaled usefulness. Our experience is that where diagnosis is practicable we find jaundice due in most cases to malaria, alcoholism chronic or acute, or malignant disease. In the former quinine without calomel is sufficient; in the latter cases medicine is impotent. Salivation is not necessary under any circumstance, says Dr. Hartshorne, and this is a fact indisputable. In sick-headache, blue mass, calomel, antacids, and oil of turpentine are enumerated as remedies, and bromide of potassium is not mentioned. He says of this last medicine in another place, by the way, that he has found it perfectly safe in twenty-grain doses. In sixty-grain doses, repeated hourly until relief from pain ensued, we have found bromide of potassium but little less reliable in sick-headache than quinine is in ague. Opium, he believes, may arrest inflammation if given early. Cod-liver oil he considers the best and most reliable of the recuperative remedies in all wasting diseases. As anaphrodisiacs he has found no remedies except bromide of potassium and lupulin. He is ignorant of any reliable pepsin made in America. We beg to call his attention to the powdered and liquid pepsin made by Scheffer & Diehl, pharmacists, of this city, as an article far superior and greatly cheaper than Boudault's. His failure to mention the "ipecac treatment" of dysentery, and the value of chlorate of potash in mercurial stomatitis, are important omissions.

Electricity he deems the best remedy for most neuroses, and he alludes to the employment of the electric eel by the Romans in paralysis and gout.

Cholera is discussed at length. Its name, coming from Greek words meaning flow of bile, is an absurd one, as absence of bile in the excreta is a marked feature of the disease. Cholera morbus is due to an irritant in the stomach or bowels. Cholera has its origin in a specific, material, migratory cause. It is a poison-spasm, a ganglionic tetanus. It is not personally contagious. Quarantine is impotent to arrest or influence its progress. Personal prevention is best insured by keeping the system at par, avoiding dieting or excessive eating. Vegetables and fruits of good quality should be eaten moderately, but should not be interdicted. Calomel and castor-oil he regards as worthless in the treatment of cholera. Bleeding he would use, except for the universally existing prejudice against its employment. He opposes the opium treatment, and brandy likewise. He employs antispasmodics and mild stimulants, frequently repeated, along with ice and frictions. This is his favorite prescription:

℞.	Chloroform, ...	āā f. ʒiss;
	Tinct. opium, ...	
	Spts. camphor, ...	
	Spts. ammonia, aromatic, .	
	Creosote, ...	gtt. iij;
	Oil cinnamon, ...	gtt. viij;
	Brandy, ...	f. ʒij.

Mix. Dilute a tea-spoonful with a wine-glass of water, and give two tea-spoonfuls every five minutes, followed by a lump of ice.

A point upon which he insists is that all diarrheas in cholera-times should be checked.

Dr. Hartshorne disposes of syphilis in three pages, and as an apology for brevity says that it is more a surgical than a medical topic. Surely so important a disease deserves a more careful and elaborate consideration, and we have never been able to appreciate the wisdom or justness of calling this a surgical affection, and of leaving it to surgical writers. Syphilis is the most serious question of the day in medicine; it is the scourge of the nineteenth century, and seems to be extending apace with civilization, and more rapidly than Christianity. Few diseases are less understood by the mass of the profession; no disease is more generally maltreated. Few diseases are more amenable to proper treatment; no affection in the whole range of disease affords a more interesting or a more profitable field for investigation. A Hunterian chancre he defines to be a sore on the genital organs. The fact is, it may occur on any portion of the body. He believes that both hard and soft chancre may produce syphilis. In all forms of chancre, barring the phagedenic, he advises mercurial treatment. This practice is opposed to the teachings of the day, and we consider it a most dangerous practice. He believes in the power of nitrate of silver and other caustics to "kill" the primary syphilitic virus. In this faith he has but few enlightened companions. If lunar caustic can kill primary syphilis, why bother patients with mercury, if the chancres are seen early?

The remarks on alcohol are forcible and convincing, and we commend them to the medical student as embodying the prevalent opinion among practitioners on the subject. In reply to the question, Does alcohol contribute to the material or to the force of the economy, or does it only excite some of its organs to exhaustive action? he replies that it may do either of the three, or neither, according to the circumstances and the quantity administered. When there is scarcity of food or difficult digestion, alcohol may contribute to the needed material; its carbon, hydrogen, and oxygen going to repair the adipose tissue at least. Under excessive exertion, alcohol may sustain the flagging forces of the system. *Accessory* food he considers a happy name to express the powers of alcohol. In full health it is always injurious, precisely in proportion to the quantity used; the same being true in disease when given disproportionately. When given in excess it excites to exhaustive action, organic if not motor. Alcoholic stimulants should never be given in quantities which produce circulatory or cerebro-nervous disturbance or superexcitation. When it quickens the pulse, flushes the face, produces drowsiness or headache, it is usually injurious. In low fevers and consumption it is held to be useful by directly exciting supporting power, by assisting the enfeebled stomach to digest food, and by retarding tissue metamorphosis, as tea, coffee, quinine, and morphine are supposed to do. As retardation of tissue change may be injurious sometimes, alcohol must be given with circumspection. Overstimulation and indiscriminate stimulation are the great dangers to be avoided. Dr. Hartshorne shows by statistics that Dr. Todd's practice of alcoholic stimulation in all acute diseases leads to disastrous results, and that under this treatment the mortality in the fever hospital attended by Dr. Todd was greater than in any other in Great Britain. In the London hospitals the use of alcohol has been largely increased since 1858, and in a similar proportion has mortality increased. In our own judgment, alcohol is seldom required in the management of disease, and should be employed only as a general stimulant in sudden or great exhaustion, and given at short intervals, in very small doses; and as a stimulant to digestion.

In this work all the diseases of the human system are brought in review, and all the great questions of the day are liberally discussed. Poisons and their antidotes are concisely treated of. Twenty-two pages are devoted to skin diseases. Two hundred and fifty formulas are given, and, though we are opposed generally to "this ready-made" clothing for disease, so to speak, yet, as Dr. Hartshorne suggests, it may not be without value to the professional novice, and even sometimes to the experienced practitioner.

The work closes with a few receipts for alimentary preparations. The subject of foods and their preparation might be with advantage more elaborately treated. But, take the "Essentials of Practical Medicine" all in all, it is one of the best works on practice that has been written, and will prove useful both to practitioners and students of medicine.

L. P. Y., JR.

Fecundity, Fertility, Sterility, and allied Topics. By J. Matthews Duncan, A. M., M. D., F. R. S. E., Lecturer on Midwifery in the School of Medicine, etc. Second edition, revised and enlarged. 8vo, pp. 498. New York: Wm. Wood & Co. 1871.

Dr. Duncan has sought from all the statistics at his command to lay down the laws that regulate human reproduction, and in the volume before us treats of a vast variety of topics interesting alike to the physician, the physiologist, and the political economist. The mention of a few of them will indicate the scope of the work.

In the first chapter the fecundity and fertility of women according to age is discussed, and subsequent chapters treat of the production of twins, of the number of twins born of women of different ages, of the size of families in which twins occur, of the laws of the fertility of women, of the size of the families in a population at a given time, of the fertility of fertile wives at different periods of married life, of the laws of the sterility of women, of the expectation of sterility, of the relative fertility of different races, of the duration of pregnancy, of the interval between insemination and conception, with many others of the same character.

Before proceeding to an analysis of the work, which from the space at our command must necessarily be a partial one, it is proper to give the meaning attached by the author to the terms fecundity and fertility. By fecundity he means the demonstrated capability to bear children; by fertility is meant the amount of births as distinguished from the capability to bear. Fecundity implies the conditions necessary for conception in the women of whom its variations are predicated. Fertility implies fecundity, but introduces also the idea of number of progeny. Fecundity merely indicates the quality, and involves no idea of number.

From the data given in his first chapter the author draws these conclusions: 1. That the actual fertility of the women of Scotland increases, as a whole, from the commencement of the child-bearing period of life until the age of thirty, and then declines until the faculty is extinct; 2. That the actual fertility is much greater before than after the climax is reached; 3. That three fifths of the population at least come from women not over thirty years of age. As the result of other data, he concludes that the fecundity of the mass of wives is greatest at the commencement of the child-bearing period, and declines rapidly after the age of forty. Initial fecundity is very high from twenty to thirty-four years of age, and reaches its climax about the age of twenty-five. In regard to age, he adds that nearly all women married at from twenty to twenty-five are fecund, and that the fecundity of wives below twenty is greater than that of wives married at from twenty-five to twenty-nine.

As illustrative of age as influencing fecundity, he quotes from Geyclin the following statement respecting the domestic fowl: "It has been ascertained," says that writer, "that the ovarium of the fowl is composed of six hundred ovula. Therefore a hen during the whole of her life can not possibly lay more than six hundred eggs, which in a natural course are distributed over nine years; thus: first year after her birth, 15 to 20; second, 100 to 120; third, 120 to 135; fourth, 100 to 115; fifth, 60 to 80; sixth, 50 to 60; seventh, 35 to 40; eighth, 15 to 20; ninth, 1 to 10.

Among women, Dr. Duncan observes the birth of twins occurs once in about eighty deliveries. The rule is one child at a time, and the next most frequent condition is temporary or permanent sterility. A plural birth, considering the increased danger to both mother and child, is to be regarded as in a certain sense a disease, or an abnormity, and is no test of fecundity; for a woman bearing twins may have fewer children in the end than another bearing one at a time, but more rapidly or for a longer period. The greatest number of plural births occurs in women who have passed the age of greatest fecundity, being one in forty-five in women from thirty-five to thirty-nine years of age. One of Dr. Duncan's tables shows that only one woman in a hundred and fifty-three among the youngest fertile women bore twins within two years after marriage, while among women from thirty-five to forty years of age every forty-second woman bore twins in the same period, or nearly four times as many. A woman's chance of bearing twins increases with every pregnancy after the first.

In regard to fertility, the author deduces the following conclusions from his tables: "1. That the mass of early or first children, up to the third or fourth, come into the world in more quick succession than those that immediately follow; 2. That a mass of children, numbering from the fourth or fifth on to the tenth, succeed one another more slowly than those of the first category, and of the third; 3. That a mass of children, following the tenth, come into the world, hurrying one after another, with a gradually increasing rapidity, which excels that of all their predecessors (a circumstance which may, in part at least, account for the great mortality of women bearing children after the ninth)."

Early marriages are more fruitful than those of a later period, those formed between sixteen and twenty years of age being most porlific. Marriage is followed by the birth of a child, as an average term, within the first year, and Sir William Petty laid it down long ago that every teeming woman can bear a child once in two years; Whitehead says every twenty months; and Dr. Duncan has no doubt that authors generally underestimate the rate at which married women bring children into the world; but he refers to some statistics adduced by Roberton, which show that in seven out of eight women, in Manchester and in York, who suckle for as long a period as the working classes in England are in the habit of doing, there will elapse an interval of from twelve to fifteen months from parturition to the beginning of the next pregnancy; and that in a majority of instances in which sucking is prolonged to nineteen or twenty months pregnancy seldom takes place till after weaning.

The chapter on the fertility of old women contains some curious facts and speculations. Dr. Good held that women marrying late were more likely to conceive than women of the same age who had been long married, for that in them "the generative orgasm had been postponed." But Burns taught, more correctly, that after a certain age the uterus is no longer capable of properly performing its functions, and that this incapability takes place sooner in those who are advanced in life before they marry than in those who became mothers earlier. But in all alike the tendency to abortion increases with women as they approach the close of the fertile period, and our author quotes Dr. Arthur Mitchell for the opinion that idiocy is met with oftener in the last child than in those preceding it; that which in so many cases leads to miscarriage ending in this in feebleness of mind. It frequently happens, he says, that between the birth of the idiot and that of the next or preceding child a much longer interval than usual occurs, and permanent sterility often follows the birth of the idiot. In many cases indications of barrenness preceded the birth of the idiot, and thereafter became permanent. In 1855 fifty-three women in Edinburgh and Glasgow, who had passed their forty-fifth year, bore living children. Among them was only one primipara, aged forty-nine, who had been one year married. Two bore second children—one at the age of forty-six, after being four years married; the other at fifty-two, three years after marriage. Four of the number bore eleventh children; four, thirteenth; two, fourteenth; two, sixteenth; and one, nineteenth: showing that most women bearing children late in life are mothers of a numerous offspring, and not those in whom "the generative orgasm" has been postponed to an advanced age.

Sterility is the fate of fifteen married women in Scotland out of every hundred, according to Dr. Duncan. Burdach has stated that one marriage only in fifty is unproductive; but Dr. West found the general average of sterile marriages among his patients at St. Bartholomew's Hospital to be one in every 8.5. As affected by age, it appears that about seven per cent. of all the marriages between fifteen and nineteen in Scotland are without offspring; that nearly all women who marry between twenty and twenty-four bear children, and that after that period sterility gradually increases with the age at the time of marriage. The question of sterility is decided for each woman, with much probability, in three years of married life, only one in thirteen of the fertile bearing children after that interval; and a wife who, having had children, ceases to bear for three years has probably become sterile, and the probability grows stronger as time advances.

In regard to the fertility of different races, Mr. Tait has collected some statistics which indicate that while that of English women is only eighty-six per cent. of the fertility of Scotch women, that of the Irish is ninety-eight per cent., and in Sweden it rises as high as one hundred and seventeen per cent.

An interesting portion of Dr. Duncan's work relates to the mortality of child-bed. We confine ourselves to the results afforded by the statistics of hospitals, of private practice, and the reports of registrars-general. From all these it appears that one woman in every one hundred and twenty, delivered at or near the full time, dies within the four weeks of child-bed. "At this result," says Dr. Duncan, "there need be no astonishment. How many women are delivered under circumstances unfavorable for recovery! Some mothers are immature. Many are diseased. Some begin child-bearing when old. All have to pass through the great risks involved in a first confinement. Some have excessive families; some are confined under the murderously depressing influence of shame." Private practice affords far more favorable results, and Sir J. Y. Simpson set down the mortality in hospitals and in private practice as one in one hundred and fifty or two hundred, the improvements in obstetrical therapeutics and hygiene having greatly reduced it in modern times.

The relation of the number of the labor to the mortality accompanying parturition is an interesting topic, and the following are our author's conclusions respecting it: 1. The mortality of first labors is about twice as great as that of all that follow; 2. The mortality from puerperal fever in primiparæ is also about twice that of the fever in subsequent labors; 3. The risk of death increases with every labor above nine; 4. As the number above nine increases, the danger from puerperal fever following labor increases with the number; 5. A woman with a large family, escaping the great risk of her first labor, is brought again into great and increasing peril as she bears her ninth and subsequent children. The age of least mortality seems to be twenty-five years, and on either side of this age mortality gradually increases with the increase or diminution of years.

But we must conclude this notice of Dr. Duncan's book, our analysis of which, we feel persuaded, will render very many of our readers desirous of acquainting themselves fully with its curious and instructing details.

Clinic of the Month.

HYPODERMIC CORROSIVE SUBLIMATE IN SYPHILIS.—Dr. R. W. Taylor, in an exhaustive paper on this subject in the Transactions of the New York Dermatological Society, arrives at the following conclusions: 1. That the use of the bichloride of mercury by hypodermic injections, though a method of treatment possessing certain advantages, is for various reasons of limited application. 2. That it is useful in the whole secondary period of syphilis, in roseola, and in the various papular syphilides, and in that form of pustular syphilide in which there is only slight tendency to the formation of pus. 3. That it very rapidly cures all syphilitic neuroses, and that it is very beneficial in the cachexia of syphilis, whether accompanied or not by perceptible lesion. 4. That it possesses no advantages over other modes of administering mercury in the treatment of mucous patches and condylomata lata, and that these lesions yield more rapidly to a local than to any form of constitutional treatment, and that in the syphilitic lesions of the nervous system and of bone, particularly if late, its use is not to be commended. 5. That the very early tertiary syphilitic lesions, provided they are not of an ulcerative character, may be very much benefited by it, and that the simultaneous administration of iodide of potassium internally may produce a cure more rapidly than when the two are given internally. 6. That the peculiar advantages of the treatment are: the smallness of the amount of mercury used, the rapidity of action, and the absence of systemic disturbance. 7. That a very minute quantity of mercury, averaging from two to three grains, thus administered, may cause the disappearance of very extensive syphilitic lesions, and the alleviation of very severe symptoms. 8. That in the greatest number of cases an injection every second day of an eighth of a grain of the bichloride of mercury will produce a cure in rather less than two months, and that in very urgent cases they may be pushed, with good effects, to the extent of one or two daily. 9. That the rapidity of cure is the rule rather than the exception, and that the time required may be stated as varying between three weeks and two months. 10. That when the injections are given every second day it is very rare to observe any unpleasant systemic effects of the mercury, and that even when they are pushed more than this these effects are never as severe as when mercury is pushed to a similar extent by the mouth. 11. That the relapses after this treatment are equally as frequent, as rapid, and as severe in character as when mercury is given in other ways. 12. That there are unpleasant local effects of the injections, such as pain of the puncture, pain over the site of injection, induration of the connective tissue, and abscesses. 13. That in many cases the pain is very slight, and soon ceases to trouble the patient; but that in others it is so severe and persistent as to necessitate a discontinuance of the treatment, and that in every case some slightly unpleasant local effects are experienced from the use of the injections. 14. That in exceptional cases the injections cause a low grade of inflammation in the subcutaneous connective tissue, producing a decided induration in deep portions of the derma; and that, owing to complications which might perhaps arise from this condition later on, it is advisable to discontinue the injections in these cases. 15. That this induration may be observed in many cases in which it is only of an ephemeral character. 16. That if proper care is used in administering the injections abscesses will rarely if ever occur. 17. That it is absolutely necessary that the patient should be both intelligent and at the same time thoroughly impressed with the gravity of his disease, in order that he may comprehend the advantages he is to derive from this mode of treatment; otherwise he could not subject himself to the inconveniences which are inevitably experienced in the course of the treatment. 18. That while in dispensary and hospital practice the injections may be frequently given, in private practice the smallness of the patient's means may often be an obstacle in the way of the continuance of the treatment. Finally, that while in some cases the treatment may be useful by reason of its rapid action, and in others for the smallness of the dose, the inconveniences which it produces, the objections of the patients, and the presence of lesions which contraïndicate its use, confine its sphere of usefulness to very narrow limits.

Belladonna as an Antigalactic.—T. A. Reamy, M. D., of Cincinnati, reports, in The Clinic, a remarkable experience of the power of belladonna to arrest the mammary secretion. During a period of fifteen years he has treated twenty-two cases, in twenty of which the success was perfect. In two the remedy was powerless. In one of these abscesses formed, an accident, which had accurred after a previous confinement, leading, Dr. R. thinks, to changes of structure, from which the breast had not recovered. Prof. R. attaches great importance to the *time* when the remedy is employed, to the *preparation* and *mode of application* of the drug. The remedy should be applied immediately after delivery, and continued throughout the forty to seventy hours which supervene between that time and the secretion of milk. An aqueous solution of the alcoholic extract, fifty grains to the ounce, Dr. R. thinks the best form; and strips of muslin saturated with this solution applied to the parts, and covered with oil-silk, the best mode of using the medicine. He lays great stress on making no friction of the glands, because of its tendency to excite secretion of milk. For the same reason he enjoins that the breasts shall not be emptied of colostrum, or of any milk which may have been secreted, and that pups, pumps, and nurses' mouths should not be allowed to come near. If on the second or third day there should be fever, accompanied with pain or fullnesss of the mamma, as will often occur, no alarm need be felt. The symptoms will subside in a few hours.

ELECTRICITY IN DISEASES OF THE SKIN.—Dr. George M. Beard, one of the highest authorities in this country on all that relates to electricity, has contributed a most valuable article to the American Journal of Syphilography on the uses of this agent in the treatment of diseases of the skin. He says: "It is yet too early to lay down *special* conclusions concerning the prognosis of different diseases of the skin under electrical treatment, but from what has already been accomplished this general proposition seems to be justifiable. For many cases of psoriasis, eczema, anæsthesia, pityriasis, and prurigo, and so forth, that under ordinary treatment are obstinate or incurable, electricity is of such great efficacy, both temporary and permanent, as to entitle it to a very high rank among the resources of the dermatologist."

EXPLORING GUN-SHOT WOUNDS.—T. Longmore, Esq., Professor of Military Surgery, etc., Netley, concludes (British Medical Journal) some interesting remarks on the instruments designed for exploring gun-shot wounds in the following words, which every surgeon who has seen much of gun-shot injuries will most heartily indorse: "As a general rule it may be stated that whatever may be the reasons for concluding that a bullet or any other foreign body has lodged in or near a gun-shot wound, if, after search by the finger in cases where a digital examination is practicable, after external manipulation and observations made in various postures of the part of the body concerned, after attention has been given to indications derived from the patient's sensations, effects of pressure upon or injury to nerves, and lastly, after a moderate but careful examination by one or other of the exploring instruments in use; if after these steps have been taken the site of the lodgment be still not ascertained, more especially if the patient be suffering pain or is in an exhausted condition, the exploration should be at once discontinued. The continuance of the search will not merely add to the weariness and distress of the patient, but if the proceedings above named have been properly carried into execution it is not likely to be attended with a successful issue. The foreign body will probably have passed beyond or out of the field of exploration, or have become deeply impacted in bone or entangled among tissues, where it could only be discovered by an unjustifiable amount of meddlesome and injurious disturbance of the structures implicated. We must rest in hope that either during the process of suppuration, or under the influence of muscular actions, or by gradual approach toward the surface, the escape of the foreign body, whatever its nature, whether hard or soft, smooth or rough, organic or inorganic, may be eventually effected without such risks; or if it be of a favorable kind and form, such as a leaden bullet is when its normal shape is retained; and if it be not in contact with a nerve, bone, or other important organ, that the wound may heal favorably notwithstanding its presence, the foreign body becoming encysted and remaining lodged, without causing either pain or mischief for many years afterward."

CHLORAL HYDRATE IN PUERPERAL CONVULSIONS.—Dr. J. G. Swayne, Physician Accoucheur to the Bristol Hospital, reports *(ibid.)* two cases of puerperal convulsions treated by the lancet and chloral, and adds that from what he has seen of the action of chloral in puerperal convulsions he is disposed to think that its action is similar to that of chloroform, but that it is more steady and persistent in its effects, and that it is much more manageable, because we can regulate the dose with much greater nicety. Although it ought not to supersede bleeding, it is yet a most valuable adjunct to it, and is in fact the best antispasmodic we can employ in such cases. He believes that the dose required to produce a decided effect must be large—at least forty grains at a time—and this may be repeated in three or four hours. He lately saw a case of puerperal mania, accompanied with much excitement and entire loss of sleep. This restlessness was quite unrelieved by full doses of opium, and was very little affected by thirty grains of chloral. He then gave forty grains of chloral, and repeated it in two hours; and the result was that the woman had six hours of tranquil sleep, after which she immediately began to improve until she made a good recovery.

CANCRUM ORIS.—Mr. McGreevy writes *(ibid.)* that he has never found any application so effectual in this affection as hydrochloric acid. He applies it to the gangrenous spots by means of a feather or small brush.

THE TREATMENT OF SCROFULOUS ABSCESS OF CERVICAL GLANDS.—Dr. Morton, of the Glasgow Royal Infirmary, adopts (*ibid.*) the following: When all attempts to prevent suppuration have failed, and when it is fully established, it is his practice to open the abscess thoroughly with the knife in such a direction that the natural folds of the skin may cover or obscure the slight scar left, preferring, when it corresponds with this, the long diameter of the abscess. He then uses a tent of lint dipped in camphorated oil, and covers the part with an oil or water dressing. The use of the tent is not continued after the first or second dressing. This plan promotes rapid healing, with less scar than we usually see. Such is Dr. Morton's experience in both hospital and private practice. He has used the liquor epispasticus of the *Pharmacopœia*, applied by a camel's-hair pencil to the interior of the abscess, but he never uses caustics. The latter, in Dr. M.'s opinion, tend to increase the size of the scar or cicatrix; and in several instances, chiefly in private practice, he has excised a dark stain, produced by the use of nitrate of silver, and with the most satisfactory results. Probably excision of unsightly scars might be more frequently performed, and with benefit, upon the necks of *fair* patients.

Dr. A. Ogston, of the Aberdeen Royal Infirmary, has obtained most satisfactory results from repeatedly drawing off the pus by small canulæ. As soon as fluctuation is evident, a minute trocar is introduced, and the abscess is emptied as completely as possible through the canula. The canula is then withdrawn, and the wound heals at once. This proceeding is repeated as soon as the matter has re-collected, the abscess is again emptied, and every time it refills the same steps are had recourse to before the fluid collects to such an extent as to cause tension. It has usually to be repeated many times, but eventually the fluid becomes rather watery than purulent, and at length ceases to be formed. Abscesses treated in this way can be readily cured without scar or deformity, and even when their site is very superficial, and they burst during the treatment, the small opening they give rise to heals without a scar, a temporary discoloration of the skin remaining for a few months, and then entirely vanishing. When such a superficial abscess threatens to point, Dr. O. is in the habit of opening it with a minute lance-shaped needle about one millimetre in breadth. The pus is squeezed out, and the little wound heals by first intention. He finds that the treatment by collodion invariably fails. In cases of open scrofulous glandular sores of the neck, with undermined edges or hypergranulation, he finds cauterization with potassa fusa furnishes the best results; the elevated white scar produced being a smaller deformity than the depressed natural cicatrix or the scars of other escharotics.

Mr. Holthouse, of Westminster Hospital, always aims to prevent a breach of surface, either by the spontaneous breaking of the abscesses or by the knife of the surgeon. The few cases which have come under his observation in hospital in-patients have been in connection with extensive scrofulous ulceration of the skin, consequent on the breaking of these abscesses; and his treatment has been directed to stop the further destruction of skin, to heal the ulceration, and to disperse such abscesses as may not already have broken. With this view Mr. Holthouse usually prescribes from five to ten minims of the tincture of the perchloride of iron in half an ounce of water, with the same quantity (half an ounce) of cod-liver oil floating on it, three times a day; and the patient has the full diet of the hospital, with half a pint or a pint of porter daily, if not contraïndicated. Unless the skin be much discolored over the abscesses, he leaves them alone, and has often been gratified in watching the gradual return of the skin to its natural hue, even in cases where at first sight it seemed almost beyond recovery. The final absorption of the contents of the abscess usually follows. If an abscess remain stationary, and it appear doubtful whether it will advance or recede, he poultices it with linseed meal, which either acts as a discutient or hastens the progress of the matter toward the surface. If an abscess slowly enlarge in spite of treatment, and its eventual bursting seems certain, he opens it before the skin has become much discolored, presses out the contents, and seals the wound hermetically. The fluid frequently re-collects, and requires again letting out; but with care there will be no loss of skin and scarcely an appreciable cicatrix. The ulceration which is left after much destruction of skin Mr. Holthouse has seen rapidly heal under the iodide of lead ointment as a local application, and the internal exhibition of the remedies before pointed out. The treatment of all scrofulous affections must be first of all constitutional. As it would be a mockery to prescribe good air, nutritious food, cleanliness, agreeable exercise, etc., to the class of patients who frequent our London hospitals, we must entirely fall back in their case on those therapeutical agents, half medicinal, half alimentary, that it is in our power to dispense—cod-liver oil and steel. Of cod-liver oil, Mr. Thomas Cooke gives one ounce three times a day to an adult. Steel he gives, not in the astringent form of perchloride of iron, but in the very soluble and non-astringent forms of potassio-tartrate of iron or citrate of iron and ammonia, which can be given in much higher doses without creating constipation. Fifteen grains of either of the above chalybeate salts, with fifteen minims of chloric ether to an ounce of water, form a most delicious mixture, which he gives the adults in ounce doses three times a day, with admirable results. Respecting local treatment, if he have to deal with a chronic abscess, the integument covering which is still healthy, or with a more acute variety still in its incipient stage, he tries to avoid both the drain upon the system which is incurred by a suppurating sore and the ugly cicatrix resulting therefrom. To this effect he covers the part with eplastrum ammoniaci cum hydrargy, which he renews every three or four days. This application, which is very similar to *emplatre de Vigo cum mercurio*, much used in France, he finds more effectual than iodine paint. If resorption do not take place, or if from the first the integument be thin and livid, and the abscess on the point of bursting, he opens it largely, as much as possible in the direction of the folds of the neck. He then fills the cavity of the abscess, and covers the parts superficially with lint or tow dipped in a lotion composed of half methylated spirits and half water. He covers the whole with a piece of gutta-percha tissue, applies a bandage, and orders the dressing to be renewed morning and evening. He always obtains by this means a rapid union and a linear cicatrix.

Extracts of Meat.—MM. Kemmerich and Müller, after making a series of experiments with the extracts of meat in alimentation, arrive at the following conclusions: the extracts of meat are not aliments directly, because they do not contain albuminoid materials; neither indirectly, because their nitrogenous principles do not arrest disassimilation. In a small dose they may be useful by the stimulant action of the salts of potass. In stronger doses, instead of being useful, they produce an injurious effect. Given in the course of protracted illness, when the economy is weakened by prolonged abstinence, the salts of potass have an injurious effect; the more so, that the organism will have lost some of its chloride of sodium. So far from aiding nutrition, they hinder it by the direct action of the potass salts upon the (blood) globules, retarding the absorption of oxygen by the predominance in the serum of salts, which absorb the carbonic acid; also, by not permitting the exhalation of the normal amount of that gas, they prevent the admission of the normal amount of oxygen. (The Doctor.)

Croton Chloral.—There appears to be a possibility that hydrate of chloral has seen its best days; for in some experiments of Liebreich he has produced a new substance, to which he gives the name of "croton chloral," and which is produced by conducting chlorine gas into allylene. It has the peculiar effect of producing at first a high degree of anæsthesia in the head, while sensibility in other parts of the body remains intact. Some experiments have been tried, and it promises to produce the good effects of hydrate of chloral, without any drawback to its judicious use. *(Ibid.)*

Notes and Queries.

A Lusus Naturæ.—Dr. Beauchamp, of Hamilton, Ohio, sends the following: "I have just seen and examined what I believe to be a *hermaphrodite*. The party is forty years old; claims to be a man, for he is married to a woman; is now under treatment for syphilis. The individual has a female pudendum, and a penis, covered with integument upon its lower surface, emerging from between the labi majora above, while below the labia meet together, forming a scrotum, in which are two testicles of adult size. The penis is cleft, from the base to its extremity, down to the site of the urethra, and that which should be a canal is simply an open gutter or trough. The membrane lining the urethra is continuous, with a vagina, which is readily seen by pulling the penis downward, and which is *above* and partly surrounds the latter. The vagina is normal, and quite three inches in length. It will be observed that that which represents the penis in this case can not be, as in many other cases of alleged hermaphrodism, an enlarged clitoris. Its position decides against such a supposition. The patient informed me that one of the testicles once slipped out of the scrotum into the vagina, and was replaced by a physician. How did this subject get syphilis? As man or as woman? The vagina would answer for copulation, but I can not think that the broad, cleft penis would be capable of intromission under the most favorable circumstances."

We regret that Dr. Beauchamp does not state anything as to the form, features, voice, and general appearance of this offspring of Mercury and Venus. Then too is there a uterus?

Is there strong sexual desire, and for which sex? Is there any reason to believe there are ovaries present? Is there any periodical mucous or sanguineous flow per vaginam? A complete history of the case would be a most valuable contribution to *teratology*. T. P.

CHLORAL CONTRA-INDICATED IN SURGICAL INJURIES AND OPERATIONS.—The following is furnished by Dr. Neill, of Philadelphia, formerly professor of surgery, etc.:

"A case came under my observation recently which so strongly illustrated a practical point in my mind that I thought it worth while to make a note of it for your valuable Practitioner. It may be that other cases of a similar kind have been recorded, and similar conclusions drawn. If this be so, my case will only serve to corroborate what is already known to others. If I was going to write an article instead of a note, I should head it *Chloral contraïndicated in the Treatment of Surgical Shock.*

"Last spring I was called about ten miles from the city to visit, in consultation, a lad, about thirteen years of age, with a gun-shot wound. It occurred on Saturday morning, about eleven o'clock, by the accidental discharge of a shotgun at close range. The load passed into the right axilla, and a large portion of it passed directly through and escaped at the upper and back portion of the shoulder. The artery was not opened, but the venous hemorrhage was extremely profuse. I did not see him until the Tuesday following, at midnight. Upon the opening of the front door the odor was so offensive that it revealed, in advance of an examination, his real condition. I found a pallid boy, of light complexion and highly nervous temperament. Upon removing the sheet the whole arm was livid, and of a leaden and blueish hue, from the shoulder to the hand, and the skin was cold and covered with vibices. His pulse was so feeble and quick that it could not be estimated by the watch. He was nauseated and loathed everything, and during twenty-four hours had not taken more than four ounces of fluid—nourishment and stimulants altogether. He rejected everything, particularly the chloral which had been administered to him to produce sleep and alleviate suffering.

"Of course the question of amputation could not be entertained; and as no reäction had taken place, although eighty-four hours had passed since the injury, and as no nourishment or stimulant could be borne upon the stomach, with an almost imperceptible pulse, and with the whole limb in a state of mortification, I expressed a most decidedly unfavorable prognosis. But why such a condition of things should exist in so short a time was not at all clear to my mind at first. The weather was not warm, the artery was not lacerated, the child was healthy and devoted to manly sports, and yet there was this prolonged and ghastly prostration and pulselessness, and mortification of the whole arm. I suspected the chloral, never having seen it used under such circumstances, and suggested its discontinuance and the administration of morphia. This produced some sleep and quieted the restlessness that night. I learned from the family that a little nourishment was borne the next day, and that the pulse had improved, and that day by day constant improvement took place, and the lad recovered, of course, with the loss of his arm.

"In conclusion let me say that, however much may be claimed for the use of chloral under such circumstances, I am convinced that it will never be a substitute for opium in the treatment of surgical injuries and operations."

THE GERMAN WAR.—The martial spirit of the Germans is not confined, it seems, to the soldiers of that warlike people, nor are the battles fought alone on French soil. The magnates of our peaceful calling in Berlin are incising one another at a fearful rate. Langenbeck, Virchow, Martin, Frerichs, and others have taken the field. The *casus belli* was the appointment of Frerichs as Lehenrt's successor to the position of Director of the Science Deputation. Virchow has openly declared that Frerichs was not the proper person for the office. In commenting on this statement, the Vienna Medical Press says: "Such an expression from Virchow could only depend on facts, and these facts meet with confirmation when we reflect that Frerichs has done nothing in science, little or nothing in literature, for a very long time indeed, notwithstanding his various positions and his earlier labors. It is very well known that Frerichs has never been dearly loved as consulting physician, but there must be other reasons for this strong opposition against him, which will be disclosed, no doubt, with time." We trust that peace will soon reign in Berlin as well as Warsaw.

VACCINE VIRUS.—The recent alarm about small-pox, which has become so wide-spread, has created an unusual demand for vaccine virus. We are requested to state that Dr. Melvin Rhorer and Dr. J. Rademaker, dispensary physicians, are prepared to fill all orders promptly, and with perfectly pure and fresh virus. Price two dollars per crust.

HUMAN SKELETONS.—We have to refer such persons as have written to us to know where they can obtain prepared skeletons to Messrs. Otto & Reynders, 64 Chatham Street, New York, who have recently advised us that they have a large assortment on hand.

DIED—In Xenia, Ohio, December 25, 1871, of tuberculosis, Thomas B. Harbison, M. D., in the forty-fifth year of his age. All who know him regret his death.

THE AMERICAN PRACTITIONER.

MARCH, 1872.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.—RUSKIN.

Original Communications.

PULMONARY CONSUMPTION.

BY R. B. MAURY, M. D.

Professor of the Theory and Practice of Medicine, Memphis Medical College.

READ BEFORE THE CLINICAL SOCIETY OF MEMPHIS.

From the days of Laennec until the present time the idea has prevailed that consumption in all its forms is dependent upon the deposit of tubercle in the lungs. Tubercle has been regarded as a neoplasm, or new formation of peculiar character, analogous to cancer or sarcoma. It has been customary to describe tubercle as occurring under two distinct forms—viz., tubercular infiltration and tubercular granulations. It is infiltrated tubercle especially which constitutes the anatomical lesion of chronic pulmonary consumption; it is tubercular granulations, or disseminated tubercle, which characterizes acute miliary tuberculosis.

Quite recently very different views have been advanced upon these points by eminent pathologists, and now the whole subject of tuberculosis seems to be undergoing reëxamination by the profession.

In discussing the subject my object will be to show what light may be thrown upon it by the study, first, of the anatomy of tubercle; and second, of its clinical history.

At first sight it might seem that the disputed points could be easily settled by an appeal to the morbid anatomy of consumption; that the microscope, in the hands of competent observers, would place before us exact information in regard to the structure of tubercle; and that pathologists could agree without difficulty as to the nature of this product. But unfortunately such is not the fact. Pathologists differ, and there is almost as much confusion to-day in their views as to the nature of tubercle as there was when Rokitansky and Lebert first brought the subject within the range of the microscope.

It is with a view then of ascertaining exactly what tubercle is anatomically that I commence the discussion. I have no original investigations in pathology of my own to report, and in quoting the views of others I shall do so as briefly as possible.

In 1846 Rokitansky published his Pathological Anatomy, in which he described the characters of *Simple Fibrinous Tubercle* and *Albuminous Tubercle*. He applied the term fibrinous to miliary tubercles, the gray, semi-transparent granulations of Laennec, which are found sometimes in the texture of organs, and at others are deposited on the surface of serous membranes as products of inflammation. Under the microscope this variety presents the following components: 1. A basement mass or blastema; 2. Certain embryonic form elements. These last are (*a*) elementary granules of various magnitude; (*b*) spherical and oblong nuclei; (*c*) nucleated cells, few in number; these nuclei and cells often being misshapen, rudimental, and stunted.

Albuminous tubercle was a term applied by Rokitansky to the products of acute tuberculosis—to the miliary granulations disseminated through the parenchyma of the lungs. Microscopic examination of these tubercles reveals—1. The ordinary nucleated exudate cell; 2. Cells with two or three nuclei; 3. Cells with filial cell-formation. This tubercle "exudes always in great abundance under the symptoms of hyperæmia." These two varieties are anatomically one and the same, and Rokitansky, while describing them separately, mentions the following analogies as existing between them: (*a*) Both are rarely the primitive tuberculosis in an organism; (*b*) both are thrown out under manifestations of hyperæmia; (*c*) with both there is effused a sero-albuminous fluid; (*d*) both affect the same organs and sections of organs. He regards tubercle as an exudate from the vascular system, and declares that it is frequently thrown out in the sequel of inflammation.

This description, faithful and minute as it is, fails to invest tubercle with distinctive anatomical characters.

In 1849 Lebert published his *Traité pratique des Maladies Scrofuleuses et Tuberculeuses*, in which is given the result of his microscopic observations. He described the tubercle corpuscles as "formations which correspond with none of the known organic forms, and are neither cells nor nuclei, nor anything else of an analogous nature; but are in the form of little roundish, solid corpuscles, which frequently have particles of fat scattered through them." (Cellular Pathology, page 518.) He considered this corpuscle to be as characteristic of tubercle as the cancer-cell is of the different forms of carcinoma. He declared that it differed from every known physiological or pathological product; thus making it the only exception, if exception it really was, to that great law, which is now generally admitted to be true, "that every pathological structure has a physiological prototype." It should also be observed that roundish, solid corpuscles are, properly speaking, not organic forms, and do not accord with our notions of a neoplasm.

These views of Lebert in regard to the anatomical characters of tubercle have prevailed in France to within a very recent period, although Virchow and Reinhardt had shown, as far back as 1847, that the so-called tubercle corpuscle was nothing more than a shriveled cell of pus; and that the masses of so-called infiltrated tubercle from which it was obtained were only the products of a simple inflammation, which, in parting with their saline, watery, and albuminous constituents, had undergone a cheesy metamorphosis.

Mr. Paget, in his Surgical Pathology, published in 1855, has also given an account of the microscopic appearances of tubercle. This account agrees in the main with that of Rokitansky, and differs from it in no material points.

Going out of the chronological order, I will next quote Dr. Beale, who says, in The Microscope in Practical Medicine, edition of 1866, that "tubercle is seen to consist of a great number of small particles, for the most part of an oval form. They vary somewhat in size and form, are evidently solid, and have a granular appearance. The great majority of them contain nothing like a nucleus. They have been described as free nuclei, but I have never been able to satisfy myself that this view of their nature is correct." To these he also applies the name of "tubercle corpuscles," and says that "they can not be regarded as the essential characteristic elements of this substance (tubercle), for they are not always to be made out in structures which are evidently tuberculous." Beale really fails to tell what tubercle is; and, according to his description, the "tubercle corpuscle" is, as Lebert declared it, without a physiological prototype. It is a pathological nondescript.

The view of this author in regard to the origin of tubercle is, however, interesting, especially when taken in connection with Cohnheim's subsequent experiments, which demonstrated the emigration of white blood-cells. He (Beale) says "it is probable that tubercle results either from the multiplication of masses of germinal matter which have passed through the capillary walls from the blood, or that it is developed from the masses of the germinal matter, usually termed nuclei, in connection with the capillary walls;" thus, it would seem, ascribing to tubercle the same sources from which we now believe pus originates. It is certainly remarkable that so expert a microscopist as Beale should be unable to assign distinctive anatomical characters to tubercle if it were really possessed of any.

Let us now turn to Cellular Pathology, and see what Virchow makes of tubercle. Here we find a step in advance, and some of that confusion removed in which the subject has been involved.

According to Virchow, tubercle is presented under one form, and but one. Of this we may take as a type the gray miliary granulations observed in the arachnoid in tubercular meningitis; the tubercular infiltration of Laennec, and of those who followed him, being nothing more than pus which has undergone the cheesy transformation. It is this material which furnishes the tubercle corpuscles, and these corpuscles are really shriveled pus-cells.

Let us study the microscopical characters of miliary tubercle as given by the same author. Upon the examination of a tubercle granule, we see "either very small cells, with a single nucleus, or larger cells, with a manifold division of the nucleus. If you compare the cells, which are the real constituents of the tubercle granule, with the normal tissues of the body, you will remark the most complete correspondence between them and the corpuscles of the lymphatic glands."

Now, here we have the first, and, I believe, only well-defined idea conveyed of the anatomical characters of tubercle, not by language only, but also by a drawing, in which tubercle is presented, as observed, under a magnifying power of three hundred diameters. From this description we are led to understand, first, that tubercle really consists of nucleated cells; second, that there is the most complete correspondence between these cells and the corpuscles of the lymphatic glands.

We quote the following from Cellular Pathology: "The best micrographer perhaps that France possesses—Robin—has in his examinations of cases of tubercular meningitis deemed it impossible to regard the little granules in the arachnoid, which everybody looks upon as tubercles, as being really tubercles; because the dogma now prevails in France that tubercle consists of solid non-cellular corpuscles, and in the tubercles of the cerebral membrane cells in a state of perfect preservation are met with." It will be inferred from this that Robin also admits the existence of nucleated cells in what the world believes to be miliary tubercle.

I am inclined to believe that Virchow has unraveled the mystery which has so long hung around the anatomy of tubercle, that he has pointed out its distinctive features. And to what does it all amount? It seems to me that its true nature is to be found in "the most complete correspondence" which exists "between it and the corpuscles of the lymphatic glands." It will be remembered that "the colorless blood corpuscles come from the chyle, and may therefore also be called chyle or lymph corpuscles of the blood." (Kolliker.) Cohnheim, Stricker, and others have demonstrated the emigration of these colorless blood corpuscles as one of the sources of pus in inflammation. Pus-cells thus emigrating from the blood channels are in no respect different from pus-cells which have arisen by proliferation of connective tissue corpuscles.

The anatomical identity of lymphatic-gland cells, chyle corpuscles, white blood-cells, and pus-cells is thus established; and this is not at all a matter of theory, for we have the authority of Beale for saying that "cells are found in the lymph, in the blood, in the lymphatic glands, in the serous fluid of certain cysts, and in many other situations which in their size, form, and general appearance so much resemble the globules found in true pus that it is quite impossible to assign characters by which they may be distinguished. The figures of these cells, as they appeared before and after treatment by acetic acid, often could not be distinguished from the figures of pus-cells treated in a similar manner."

Indeed, Virchow might with equal propriety and truth, in speaking of tubercle-cells, have said: "You will observe the most complete correspondence between them and pus-cells," pus-cells and lymphatic-gland cells being convertible terms.

Now, when Virchow declares that the deposits found within the air-cells in tuberculosis are catarrhal or inflammatory products, while Villemin and Lebert declare that they are genuine tubercles, and not at all distinguishable from the tubercles found outside the air-cells, we may well express the doubt whether there is any real difference between pus-cells and tubercle-cells. Indeed it does not seem at all likely that the microscopists are going to answer for us the question, What is tubercle?

If I am correct in the conclusion that the tubercle-cell and the pus-cell are anatomically in nowise different, let us see if there are not other reasons also for believing them to be one and the same structure.

If the situation of these cells in tubercular meningitis be examined, we are struck by the fact that the connective tissue which composes the outer coat of the blood-vessels is the part most actively engaged in their production. Pathologists tell us it is in this very connective tissue that pus-cells are developed in ordinary inflammations, either by proliferation of its corpuscles or by a wandering into it of blood-cells from the capillary vessels. We are also told that in so-called tubercular disease of the lymphatic glands it is impossible to distinguish the tubercle-cell from those which result from proliferation of the normal gland cells under the influence of inflammation.

In Villemin's "Observations on Tuberculosis," published in 1868, we are told that no anatomical distinction whatever can be made between the scrofulous and tubercular gland, the one presenting a proliferation of cells from simple irritation, the other tubercle cells, so-called; Villemin himself believing that scrofulous inflammation and the tubercular process are entirely distinct.

A reference to Lebert's late "Contributions to Experimental Pathology," published in 1867 (British and Foreign Medico-Chirurgical Review, July, 1868), shows that he now believes there is no such thing as a tubercle; that as a supposed neoplasm it does not differ at all from the products of inflammation, and that the miliary granulation, be it found in the lungs, pleura, or arachnoid, is nothing more than a metastatic deposit, which results from a preëxisting inflammation in some other locality.

Lastly, I would invite attention to this fact, that tubercle, if it be a neoplasm at all, is unlike all other neoplasms in having no blood-supply provided for its nutrition. It is a non-vascular product which soon dies, indeed dies at once, for the reason that no provision is made for its maintenance. No new vessels are ever found running into a tuberculous mass, and those vessels which once existed in the midst of tissues in which tubercle is formed are soon obliterated by the pressure of crowded cells.

Now, it is not a part of the plan of nature to originate neoplasms, benign or malignant, animal or vegetable, without providing some adequate means for their growth and maintenance; and it is for the reason that no such means are provided in the case of tubercle that we find every writer alluding to its abortiveness or early tendency to degenerate.

In the presence of these facts I express the conviction that tubercle can not properly be considered a neoplasm possessed of peculiar anatomical features, and classed with cancer, sarcoma, and other acknowledged neoplasms.

[Note.—Since the above was written the third volume of Reynolds's System of Medicine has been published, in which is an article on chronic pneumonia by Dr. Wilson

Fox. According to him, tubercle consists in a multiplication of cells and nuclei in dense masses, and on page 766 there is a figure in which tubercle-cells are represented. These cells are excellent representations of pus-cells.]

I now propose to briefly examine the clinical history of tubercle, in order to see what light is thrown by it upon the nature of this product.

Setting out with the assumption of Laennec, that consumption is tuberculosis, we admit its appearance under two forms, the acute and chronic. Our attention has been called by Niemeyer especially to two forms under which chronic consumption is presented, and these I will proceed to illustrate.

1. An individual in the midst of good health contracts what we all understand as a bronchial catarrh. The acute symptoms subside, and the patient is left with a more or less troublesome cough, which is attended with a mucous expectoration. Weeks pass by, and the cough continues; it may be under the influence of fresh exposure, or it may be in consequence of that prolonged irritation of the bronchial mucous membrane, which is incidental to the pursuit of such occupations as those of the needle-grinder, stone-mason, and miller. And even in the absence of such irritation it is no uncommon thing to observe that men whose physical powers are overtaxed by business pursuits, when they contract a cold, find it very difficult to shake off the disease, and the cough becomes established. At length the symptoms change. The cough, which before was not very troublesome, now becomes harassing; the appetite fails, the strength declines, the patient begins to emaciate, and perhaps hæmoptysis occurs. The physician, being now called, discovers a too frequent pulse, an exalted temperature, and very soon those physical signs which denote structural changes in the pulmonary parenchyma.

For a period of nearly two years I have been earnestly studying this subject under the guidance of Niemeyer's teachings, and can attest from a very considerable experience the entire truth of the above description. The symptoms which characterize and which invariably denote the invasion of supposed tubercular disease are the rise of pulse and the elevation of temperature. Up to this point there has been nothing appreciable but a catarrh of the respiratory mucous membranes, and with the exception of his cough and slight expectoration the patient has been in his usual health.

In regard to the elevation of temperature and the rise of pulse which are said to denote invariably tubercular invasion, I may add that I believe it to be a rule which has no exceptions. Out of thirty cases which I have carefully observed with reference to this point I have not met with a single exception.

2. In order to illustrate Niemeyer's second clinical form of phthisis, I will read the following case from my note-book: H. L., aged thirty-three years; height, five feet eleven inches; weight, one hundred and fifty pounds; family entirely free from consumptive record. Previous to a falling off in health, Mr. L. had for twelve months been much overworked and harassed by business troubles of a peculiar nature. The approach of disease was insidious. He complained first of an indisposition for business, and of a feeling of lassitude, with aching pains in the neck and shoulders. He lost appetite and weight appreciably. His family physician, being consulted, made light of his complaints, and recommended a liniment. His symptoms grew worse. He soon began to have a slight dry and hacking cough. He was feverish and emaciated quite rapidly. These symptoms came on without apparent cause. There was no exposure, and no history of a catarrhal attack. Several times slight hæmoptysis occurred, never exceeding at one time a tea-spoonful or two of pure blood. He declined steadily in flesh and strength. In this condition he came to me for an opinion on July 5, 1870. He stated emphatically that though he had had fevers, they had

been broken up under the use of quinine, and that he was then entirely free of them. I mention this circumstance because it so often happens that patients deny ever having had fever in this disease, when a trial of the thermometer has invariably revealed an elevated temperature, as it did in the present case. Examined at ten A. M., his pulse was 92, and the axillary temperature 101° F. Physical exploration disclosed a very slight but an appreciable deviation from the normal standard. Percussion resonance was diminished over left apex anteriorly. Over the same region there was feeble respiration, and at end of inspiration dry crepitus.

The nature of the disease being explained to the patient, he was advised to quit business and spend the summer in some quiet country place in the North or West. He immediately complied with my instructions, and went to visit some friends on Lake Erie. Afterward he spent a short time in Minnesota. In the fall he returned to business in good health.

[NOTE.—On the 20th of January, 1871, I had an opportunity of carefully reëxamining this gentleman. His pulse had returned to the normal standard, and the temperature likewise. Nutrition was good, and he had entirely recovered his weight and strength. No physical signs of disease were appreciable, and the only remnant left of his former complaint was a slight, occasional cough, with mucous expectoration. This patient passed safely through the winter, and up to the present time (December, 1871) has continued in excellent health, and is able to discharge as well as ever the duties of an active business.]

Now, the history which I have here presented would, according to Niemeyer, have justified us in the diagnosis of a genuine tuberculous consumption, the lesion being a deposit of miliary granulations upon the surface of the bronchial mucous membrane, which rapidly extends into the bronchioles and air-cells; a condition the sole termination of which is death; a disease which seldom lasts more than a few months.

Out of the thirty cases alluded to, this one alone presented such a history. Its features were so entirely in accordance with Niemeyer's description of genuine tuberculous invasion of the bronchial mucous membrane that it was observed and followed up with the greatest interest. The sequel shows that the lesion in this case must have been a very different one from that which his teachings indicate.

I have appealed to the clinical history of tubercle with the view of calling attention to the following facts:

1. That the commencement of so-called tubercular deposit is invariably marked by fever, or a rise of the axillary temperature above 99° F.

2. That entire restoration to health in these cases is not uncommon; a fact which I have not here proved, but one which is well established by general experience.

Now, if tubercle be a neoplasm, its clinical history is unlike that of any other neoplasm with which we are acquainted. When cancerous growths or sarcomatous growths, or any neoplastic formations whatever, make their appearance in the parenchyma of organs or the superficial tissues, the thermometer records no elevation of temperature as a rule. In tuberculosis, acute or chronic, there is always a rise of temperature above the normal standard. Again, it is very rare, if it ever happens, that genuine neoplasms, benign or malignant, once established in the tissues, undergo spontaneous removal. It is not uncommon for tubercle, so-called (in the infiltrated form of Laennec), to present the history of spontaneous removal, and to leave no traces of its former existence there, unless it be a puckered cicatrix or a cheesy nodule.

The clinical history of chronic tuberculosis, as we have been in the habit of calling it, sustains the idea of an inflammatory process from beginning to end, but is not intelligible at all if we suppose its pathology to consist in the development of a neoplasm.

Now, it has been asked, what good is to be derived from this change in our views of the pathology of consumption; what advantage is to be obtained from the recognition of its dependence upon an inflammatory process? I answer, much good every way. In the first place, it puts us in the way of adopting a rational prophylaxis. It suggests the importance of educating people generally, and especially those who seem prone to pulmonary disease, to avoid improper exposure and to guard the health. Nearly all the cases which have come under my observation date their pulmonary troubles from and ascribe them to exposure and catarrhs. I agree with Niemeyer decidedly that the popular belief upon this subject is correct. Indeed I do not consider it a debatable question. Most of the cases of consumption we meet with are the result of neglected colds.

It seems to me that the treatment adopted by all, by the opponents of these views as well as by their advocates—viz., recommending a life in the open air—demonstrates the correctness of this pathology. The benefits of such a life are that it lessens the susceptibility to catarrhal affections by developing the physical powers, and favors the removal of existing inflammations.

There is another good to be derived from the recognition of the fact that the structural changes in the lung in this disease are inflammatory. It has been customary, and still is, even with many of the most intelligent and best informed members of our profession, to feel that it is useless to attempt any rational therapeusis in these cases. The prevailing idea is that the lungs are the seat of a neoplastic deposit; that the structural changes are beyond the reach of art, just as those in cancer are; that the case is hopeless, and the result merely a question of time. The patient is generally dismissed, with the advice to take whisky and cod-liver oil, when oftentimes there is marked pyrexia; when stimulants are likely to aggravate existing troubles, and when the digestive organs are entirely unable to assimilate oily food. Valuable time at the commencement is thus lost, the disease progresses unchecked, and serious injury is soon done the lung.

In this connection I will simply say that I have repeatedly verified the experience of Niemeyer in regard to the good effect of absolute rest, counter-irritants to the chest, the administration of Heim's pill, the avoidance of stimulants, and the use of such food as is easily digested. Under this treatment the fever subsides, the cough lessens, and digestion is improved. Stimulants, nutriment, and exercise, with change from sedentary to active life, may then very properly be recommended.

MEMPHIS, TENN.

ON THE TREATMENT OF HEMORRHOIDS IN PREGNANT AND PUERPERAL WOMEN.

BY FORDYCE BARKER, M. D.,

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While all who are engaged largely in obstetric practice must have encountered a great deal of suffering from hemorrhoids in pregnant and puerperal women, the young practitioner, who consults his books for directions as regards the management and treatment of this painful affection, will find in his text-books on midwifery and diseases of women only the most meager and unsatisfactory allusions to it. Many of these works make no allusion to this subject, and in those which do refer to it, including the special work on the Signs and Diseases of Pregnancy, by the late Dr. Tanner, not more than a page is devoted to this topic; and in all nearly the same explanation of the causes and the same meager hints as to treatment are found. The only exception to the above remark is the work of Dewees on Females (not his Midwifery), in which this affection is discussed pretty fully, and its treatment minutely detailed, with all the practical sagacity which characterized everything from the pen of that eminent man. I think I may say, without qualification, that since the article by Dewees was written, now nearly half a century, nothing of value, either in English or French, has been added to the literature of this subject. If the young practitioner then turns to his surgical authorities, he will find no special discussion or special direction for treatment of this affection occurring as a consequence of or a complication with pregnancy and parturition. Yet under these circumstances hemorrhoids may almost be regarded as having a distinctive pathology, while the treatment must be essentially modified by the especial condition with which it is associated. During gestation we have as a predisposing cause the pressure of the gravid uterus upon the rectum, which retards or prevents the return of the blood from the hemorrhoidal plexus of veins to the inferior mesenteric veins. But this exists as a cause in every pregnant woman, and therefore some other element seems to be necessary for the development of the disorder, and this may be either constipation or diarrhea. In constipation there is probably the same atony of the coats of the hemorrhoidal veins as exists in the muscular coats of the rectum, and the pressure of accumulated fecal matter contributes to make these veins varicose, and, if long continued, to develop the hemorrhoidal tumors. The effect of a purgative is to stimulate an abnormal peristaltic action in directly an opposite direction to the returning blood of the hemorrhoidal veins. Some who are subject to piles are never constipated, but have habitually a loose, relaxed condition of the bowels, the same atony of the venous coats resulting from the irritation and exhaustion of diarrhea as exists in constipation. So therefore either constipation or diarrhea may develop the hemorrhoids. If the hemorrhoidal veins have become varicose during the later periods of gestation, the tumors may be developed by the long pressure of the fetal head on the rectum during labor. The hemorrhoidal veins sometimes swell enormously at this period, as they are probably weakened by the distension they have suffered during the progress of the labor, and they regain the power of contracting at this time with great difficulty. In many patients the hemorrhoids are first developed by the action of the purgative given two or three days after confinement.

I will now describe the treatment which I have found the most successful in each of the above conditions, and which I have substantially taught in my lectures to students for more than twenty years past.

When hemorrhoids are developed during the later periods of pregnancy, the indications are obviously to counteract the constipation or the diarrhea, and to stimulate and to restore the tonicity of the hemorrhoidal veins. The inquiry will then naturally suggest itself, have we any agent or combination of agents in the materia medica capable of effecting these results? I know of no article which so clearly and positively produces these two results as aloes, and on this I have mainly relied. I am well aware that the general voice of the profession is against the use of aloes where there is any tendency to hemorrhoids. That "aloes is contraïndicated by hemorrhoids" is not only the doctrine of the "Dispensatory of the United States" (Wood and Bache), but it is also the opinion of most writers on materia medica from ancient times down to the present day. "Fuchsius was of opinion that of one hundred persons who should take aloes frequently as a laxative ninety would be attacked with piles. Murray blames physicians who are induced by the gentle and certain action of this medicine to expose their patients to so serious a consequence. It was to this purgative that Fonsecha attributed the prevalence of piles among the inhabitants of Padua, and Stahl makes a similar statement in regard to the people of Hamburg. Calvin is cited as a prominent example of this mischief produced by aloes; for this celebrated reformer is said to have died ultimately from the effects of the piles which it gave rise to; but as he was of a frail constitution, subject to quartan ague, gout, and gravel, the part which aloes bore in his demise may reasonably be judged to have been small."* But these opinions have not been accepted by all; for Cullen, Sir Benjamin Brodie, Trousseau and Pidoux, and others have doubted whether aloes is productive of piles, but attribute this infirmity not to the medicine, but to the constipation which aloes is used to remove. I will, however, parenthetically say here, from my own observation, I am convinced that aloes will under certain conditions of the system, and in certain doses, develop piles. The special property of aloes is "to exert the muscular contractility of the colon and rectum," and "to stimulate the venous system of the abdomen, and especially of the pelvis." That these are the effects of this agent I have not only the authority of special writers on therapeutics, as Pereria, Wood and Bache, and others, but I believe the general experience of the profession also will confirm the assertion. It would seem therefore that the use of aloes for the cure of hemorrhoids in pregnant women would have suggested itself from *a priori* reasoning; but I am not aware from anything that I have read that it ever has. I suppose that the general impression that aloes is contraïndicated where there is any tendency to hemorrhoids, and that it possesses emmenagogue properties, has had great influence in preventing this. In my own case the use of this article for this purpose was the result of gradually accumulating observation rather than from any reasoning on the subject.

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*Stillé's Therapeutics and Materia Medica, Vol. II., page 571.

In the early days of my professional life I was engaged to attend a woman in her confinement who suffered from obstinate constipation. I prescribed for her Dewees's pills. At the time of her confinement she mentioned that in her former pregnancies she had suffered very much from piles, but that my pills had cured them. If I had known of her hemorrhoidal tendency I should not have given these pills, and I was therefore quite surprised by her statement, as the result seemed so contrary to all that I had been taught. From this time I began to experiment as to the effect of aloes in the treatment of hemorrhoids, associated with constipation, in the pregnant; and for many years past I have constantly made use of aloes for their cure, whether the hemorrhoids were the result of constipation or of diarrhea. I give it, combined with other agents, according to the special indications of each case, and in such doses as I learn by experience of the peculiar idiosyncrasy of the individual is necessary to secure one easy, free, daily evacuation of the rectum. Some require a grain morning and evening, while in others a half grain is sufficient. In anæmic patients I combine the aloes with the sulphate of iron. In the two last weeks of gestation I always combine it with the extract of belladonna.* The following is a frequent prescription with me:

℞. Pulv. aloes soc., . . . } āā ℈j;
Sapo. Cast., . . . }
Ext. hyoscyami, ... ʒss;
Pulv. ipecachuan., . . . gr. v.
M. Ft. pil. (argent.) No. 20. S. One morning and evening.

When the patient is anæmic, I add to the above one scruple ferri sulphat. Some ten days or two weeks before the supposed time of labor I substitute the extract of belladonna, ten grains to one scruple, for the extract of hyoscyamus. When the hemorrhoids are associated with an irritable rectum, and frequent, small, teasing, thin evacuations, I substitute for the hyoscyamus a small quantity of opium, giving a smaller quantity of the aloes, as in the following formula:

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* *Vide* American Medical Monthly, January, 1861, "An effort to shorten the duration and diminish the pain of the first stage of labor," by the writer of this article.

℞. Pulv. aloes soc., . . .
Ext. opii aq., ... } āā gr. x.
Sapo. Cast., ...
M. Ft. pil. No. 20. S. One morning and evening.

It is unnecessary for me to multiply formulæ, as the general principles by which I am guided will be sufficiently evident from the above.*

In some cases I have not been consulted, and have not known of the hemorrhoidal tendency of the patient, until my attendance during labor. I have seen the hemorrhoidal tumors sometimes become very large during the labor. Dewees says: "Much may be done during labor to prevent a severe spell of piles by the accoucheur making a firm pressure upon the verge of the anus with the palm of his hand, guarded by a diaper, during the progress of the head through the external parts, and by carefully returning them after the expulsion of the placenta, as the sphincter is now fatigued, and will not oppose their descent." I have frequently tried this expedient, but I can not say that it has been very successful, as the tumors soon come down again, and under these circumstances they are very apt to become strangulated, inflamed, and cause a great deal of suffering. When I find this condition of things, I have within a few years past adopted the plan of forcible dilatation, recommended by my friend and colleague, Prof. Van Buren. My method is this: the patient being fully under the influence of chloroform, I select the moment after the delivery of the child and before the placenta is brought away. I push back the tumors within the sphincter, if I can readily; if not, I leave them alone, and introduce both thumbs, back to back, well in the sphincter, and opening them as wide as possible I draw them through the sphincter. During this time I have firm pressure made on the uterus by an assistant, and in several instances the operation was followed by the sudden expulsion of the placenta from the vagina. I direct the following ointment to be applied twice daily to the tumors, and well up in the rectum:

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* My friend and colleague, Prof. Wm. T. Lusk, has given me a memorandum from his note-book of the Clinical Lectures of the late Prof. Oppolzer, of Vienna, in 1868, which particularly struck him, as when a student he was familiar with my teaching on the subject. He says: "At the beginning of the hour Professor Oppolzer was wont to rapidly examine and prescribe for a large number of out-patients. Many of these were Polish Jews, drawn to Vienna by the great fame Oppolzer enjoyed in the treatment of hemorrhoids, an infirmity to which the Jews of that region, owing to sedentary habits, are specially liable. His prescriptions were, when piles are associated with constipation, aloes and quinine; without constipation, aloes and sulphate of iron. For bleeding piles:

R. Ferri sulphat., ... scru. i;
Ext. aloes aq., ... dr. i;
Ext. taraxaci. q. s. ft. pil. No. 60.

S. One morning and evening, and increase to three a day if necessary."

I will also add the following sentence from Dr. Chambers's Restorative Medicine, page 58: "Take, for example, aloes. It is a purgative, evacuating effete tissue; but what a bracing effect it has upon the mucous membrane of the lower bowel, restraining its oversecretion of mucus, and restoring the elasticity of the congested blood-vessels."

℞. Ung. gallæ co., ... ℥j;
Ext. opii aq., ... ℈j;
Sol. ferri persulph., . . . ʒj.
M. Ft. ung.

The result has been in every instance that the tumors have gradually disappeared, and the patients have had very little suffering from the operation.

Where hemorrhoids come on after labor, the suffering is generally much greater than when it occurs during pregnancy. They are very often induced by the action of the purgative given two or three days after confinement.

It is now many years since I have been convinced that castor-oil was one of the worst agents that could be used as a laxative when there is a tendency to piles, as in many instances I have seen its action develop them. For many years I have annually spoken of this to the medical class before whom I have lectured, and I have received many letters from former students corroborating my statement by their own observation. But I have never seen this alluded to, except in one work—viz., Hardy and McClintock on Midwifery and Puerperal Diseases—who incidentally make the following remark: "We may first observe that castor-oil is ill suited for patients who have hemorrhoids, being very apt to produce in them tenesmus and considerable irritation of the rectum." I may add the following from Quain:* "Common opinion has assigned to castor-oil a character for blandness (probably because of its being an oil) to which it is not entitled. It is an efficient purgative, but, except when given in minute quantities, it usually irritates the rectum."

In Wood and Bache's Dispensatory (article, Castor-oil) we find the following: "Some apothecaries are said to use it as a substitute for olive-oil in unguents and cerates; but the slightly irritating properties of even the mildest castor-oil render it unfit for those preparations which are intended to allay irritation." It is curious that its irritating action on the mucous membrane of the rectum has not attracted more attention.

In those who have, or are predisposed to have, hemorrhoids I give the following on the second day after confinement:

℞. Magnesiæ sulph., . .
Magnes. carb. . . . .
Potas. sup. tart., . . .
Sulphur. sublim., . . .
} āā ℥ss.

Mix thoroughly. S. One, two, or three tea-spoonfuls of the powder before eating in the morning.

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* Diseases of the Rectum, page 16. In the case of a friend and classmate of mine, who is suffering from epithelial cancer of the rectum, and is now under the care of Prof. Gross, of Philadelphia, the first symptom of his disease followed the purgative action of castor-oil. A second dose of this medicine, a few days subsequently, produced still more intense and persistent suffering.

This powder produces a soft evacuation, without pain, even when the hemorrhoids are inflamed. By procuring a daily evacuation with the powder, and the use of the ointment before mentioned, I have found the hemorrhoids in puerperal women soon cease to give trouble.

NEW YORK.

ON THE SURGICAL USES OF CARBOLIC ACID.

Being a Composition of Opinions recently expressed by various Surgical Authors.

BY LOUIS BAUER, M. D.

A few years have sufficed to render carbolic acid the most popular and indispensable remedial agent. Lister had scarcely uttered the last word in his plausible article on the subject when it was reëchoed from all parts of our planet. The whole surgical literature became at once singularly "carbolized," and every surgeon might have been scented by the specific odor of the article following his trail like the tail of a comet. The incomparable disinfectant of the nineteenth century had infected the professional mind to an alarming extent, and completely deadened its power of sober observation and criticism. Carbolic acid has been intruded upon all physiological and accidental apertures of the human body, while the intervening space received its due coating. It has been resorted to in the living and the dead to prevent "*decomposition.*" It has successively been recommended and used against the most heterogeneous diseases and injuries to which the human flesh is exposed. It has been administered, per and upon os, as medicine and paste; in fine, has become the great arcanum of modern surgery.

The current of professional favor has not as yet stopped. Through very respectable quarters eulogistic reports are sent forth, claiming the most extravagant benefits from the use of carbolic acid. Heretofore Edinburgh has been rather reticent; but since the great skeptic Syme has made room for Lister, the oracle at modern Athens has broken its significant silence.* Joseph Bell is its inspired mouth-piece. The most dangerous cases, and by the score, have been, and most successfully, treated by the carbolic acid. All went off serenely, with almost perfect exclusion of suppuration. Among the rest of the cases there were three abscesses, compound fractures of humerus and ante-brachial bones, compound dislocation of the elbow-joint, two perforating wounds of the knee-joint, psoas abscess, etc.

In the University College Hospital of London † carbolic acid has been found serviceable when "*carefully*" applied, otherwise chloride of zinc is *more* commendable. It is claimed that carbolic acid keeps fever down after capital operations, and limits suppuration. Some compound fractures that seemed to require amputation were cured by Lister's method. Since this remedy has been introduced into the hospital no pyæmic symptoms had appeared after amputations. In some cases a persistent emesis had occurred, for which no other cause than the carbolic dressings could be assigned. In already-existing suppurations carbolic acid proved to be rather injurious.

Maudner joins in the favorable opinion, and has seen excellent results in the London Hospital. Holt, of Westminster Hospital, London, is equally favorably impressed by the article. McCormic has treated seven cases of compound fractures, one amputation, wound at the thigh, and several minor injuries. Among the former there was one in which the knee-joint had been laid open incidental to the fracture of the patella. In most cases suppuration was *prevented* or *limited.* The author used an aqueous wash, 1:30, and *simply covered the wound* with an oily solution, 1:4. After previous opening, Hector C. Cameron [*] and Hugh Tomson respectively cured a large hydroma of the neck and a very large abscess. In Dittl's Clinic more than four hundred cases were subjected to carbolic treatment. Englisch [†] expresses his observations in the following summary: "In incised and contused wounds, the carbolic acid limits both suppuration and necrosis of the interested tissues. The most aggravated compound fractures healed kindly under carbolic dressings. It is very serviceable in gangrenous inflammations of the connective tissue, peri-adenitis, and periostitis; but indifferent in inflammation of glandular, bony, and medullary structures. Cold abscess did well by being freely opened, and the cavity dressed with lint impregnated with carbolic acid. It acted very favorably upon recent stumps. Large wounded surfaces absorb the carbolic acid in considerable quantity, which is then eliminated by the kidneys."

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* Edinburgh Medical Journal, May, 1871.

† London Lancet, Jan., pp. 86, 122; Dublin Quarterly Journal, Feb., p. 52.

The foregoing statements in behalf of the inestimable virtues of carbolic acid are but a few of many. They refer exclusively to surgical cases; but there is an endless number on record of recent date pertaining to all kinds of diseases of diametrically opposite nature, which unavoidably must engender great doubts as to their reliability.

While thus the carbolic enthusiasm shows an unabated high tide, a few breakers have troubled the waters. In fact, some isolated but weighty and sober voices have been heard against carbolic acid which can not fail to challenge the attention of the profession. Machin, of Birmingham, has lost two cases in attempting to cure scabies by carbolic acid. Prof. Roser, [‡] who has apparently thoroughly tested the therapeutical efficacy of the remedy, speaks of it in a rather contemptuous strain. He remarks "that Lister's paste might be serviceable in unimportant abscesses, where there is no fever or cachexia, but could as well be dispensed with." In cold and articular abscess and compound fractures it is useless, in Roser's estimation. C. Boehm* has largely experimented with Lister's, and a simple paste made of linseed-oil and chalk. With both he has obtained the very same results, and he infers "that there is no specific virtue in carbolic acid; that both pastes exclude the air from the wounds, in which circumstance their usefulness consists."

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[*] Glasgow Medical Journal, November.

[†] *Oestreichische Zeitschrift für practische Heilkunde*, Nos. 30–33.

[‡] *Archiv der Heilkunde.*

The most withering evidence comes from Glasgow itself.† During 1860–61–62 one hundred and twenty-six amputations of the extremities were performed in the Glasgow Medical Infirmary, and the stumps treated in the usual way. Of the patients, eighty-five recovered and forty-one died; that is, one in three. In 1867–68 seventy-three amputations were made. In the after-treatment carbolic acid was freely employed according to Lister's plan. Thirty cases terminated fatally; one in two and a half. Worse still were the results in compound fractures. One hundred and fourteen cases of this description were admitted into that institution during the former period; twenty-six of the injured died; mortality, one in four and a half. In the year 1868 fifty-nine cases of compound fractures were treated with carbolic acid, of which twenty were lost; mortality, one in three.

For the present this will suffice. I am fully aware of the onerous task to oppose fashion, being entirely beyond the reach of reasoning. Nevertheless it appears to me the duty of every reflecting mind to ponder, compare, analyze, and to observe closely before it joins in the general enthusiasm. A practitioner of many years' standing knows by experience that new remedies are almost daily brought on the surface, become fashionable, are carried along by professional favor, and sink again into oblivion, scarcely to be remembered. Whether carbolic acid is one of them, time alone can show.

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* *Wiener Medezinischer Wochenschrift.*

† London Medical Times and Gazette.

But admitting, for the sake of argument, that there are some estimable therapeutical virtues in carbolic acid, it must be evident to the thoughtful that carbolic acid is, to say the very least, grossly overrated, and that it is absolutely impossible to render it useful in all the heterogeneous cases for which it is said to have been beneficially employed.

I need not say that I have likewise resorted to this remedy in cases which I thought susceptible of benefit; but I have been signally unfortunate, for I have not in one single instance realized any of those glorious effects which are claimed. Among other experiments, I injected three dead bodies with the third part of the mass recommended for that purpose, and each body decomposed as rapidly, and even more so, than if nothing had been done; whereas, I prepared other bodies in the same manner by the crude acid, in which there is a large portion of empyreumatic oils, and the subjects were most excellently preserved for months. A newly-killed dog, and thus injected, exhibited no signs of decomposition at the end of two years. On the other hand, fashion has occasionally prohibited the introduction of means and methods which eventually have forced their way to professional notice and favor. When Priesnitz came forth with the systematic treatment by cold water, he was laughed at, sneered at, and ridiculed in lampoons. His clinical observations were set down as vagaries, and his results as inventions; yet no well-informed physician of the present day will deny that hydropathy has filled a large chasm in materia medica, more particularly in the treatment of zymotic diseases.

I could adduce many more instances in which fashion has obstructed the way of true progress in medical sciences and the healing art; but my present object is simply to call for a more calm and unbiased observation in so far as carbolic acid is concerned, reserving to myself the privilege to collect and advance the facts as they may present themselves hereafter.

St. Louis.

Reviews.

On some Disorders of the Nervous System in Childhood. By Chas. West, M. D., Fellow and Senior Censor of the Royal College of Physicians of London, etc. Philadelphia: Henry C. Lea. 1871.

From the time that Dr. West gave to the profession his standard work on diseases of children, now nearly a quarter of a century ago, he has been justly regarded as one of the very highest authorities on all that relates to the ailments of childhood. In March, 1871, he delivered the Lumleian Lectures before the Royal College of Physicians, in London, and selected as his topic the Nervous Disorders of Children. These lectures embraced one on neuralgia and epilepsy, one on chorea and paralysis, and one on disorder and loss of power of speech and mental and moral peculiarities, and their disorders. The three have been issued by Mr. H. C. Lea in a beautiful little volume of one hundred and thirty pages. The circumstances under which the work was produced afforded Dr. West an opportunity not only to display that intimate acquaintance with child-life which he possesses in a very rare degree, and to use that large experience which he has so industriously cultivated, but an excuse also for dropping the dry style of the text-book, and treating us to some most exquisite descriptions of the mental peculiarities of childhood. Indeed, the value not less than the charm of the work consists chiefly in the beauty and finish of its portraitures of disease, and of the peculiarities of sick children. Throughout almost every line in the book it may be seen that the author has lived among children, that he loves them, and thereby has come to understand them. Here is a sample of how he writes about them:

"The child lives in the present, not in the future, nor much even in the past, till the world has been some time with him, and he by degrees shares the common heritage of retrospect and anticipation. This is the great secret of the quiet happiness which strikes almost all visitors to a children's hospital.

"No one can have watched the sick-bed of the child without remarking the almost unvarying patience with which its illness is borne, and the extremity of peril from which, apparently in consequence of that patience, a complete recovery takes place. Much, indeed, is no doubt due to the activity of the reparative powers in early life, but much also to the unruffled quiet of the mind. No sorrow for the past, no gloomy foreboding of the future, no remorse, disappointment, nor anxiety depresses the spirits and enfeebles the vital powers. The prospect of death, even when its approach is realized—and this is not so rare as some may imagine—brings in general but small alarm. This may be from the vagueness of the child's ideas; it may be, as the poet says, that in his short life's journey 'the heaven that lies about us in our infancy' has been so much with him that he recognizes more clearly than we can do

'the glories he hath known,
And that imperial palace whence he came.'

"I dwell on this truth because it is of great practical moment that we should bear in mind to how very large an extent the child lives only in the present; because it follows from it that to keep the sick child happy; to remove from it all avoidable causes of alarm, of suffering, of discomfort; to modify our treatment so as to escape a possible struggle with its waywardness; and even if death seems likely to occur, to look at it from a child's point of view, not from that which our larger understanding of good and evil suggests to our minds; are duties of the gravest kind, which weigh on the physician, on the parent, on the nurse, and which it behooves us none the less to remember because they are not dwelt on in the lecture-room or in the medical treatise.

"One word, and but one, I would add here, and I trust I may do so without incurring the suspicion of want of respect for religion, or of want of faith in its doctrines. Some of the most painful deathbeds which I have ever witnessed have been those of children whose overanxious friends have striven to force upon their minds the deepest verities of our faith in that definite form in which they are embodied in catechisms and formularies. It is easier to frighten than to console; the dark grave is realized, or at least imagined more vividly than its conqueror; and the little child, driven to look within for the evil which it does not know, and can not find, but vaguely dreads, and would be sorry for if it knew it, has moved me to compassion only less than that I felt for its broken-hearted torturers, who have failed to learn that the little children, of whom our Savior said that of such was his kingdom, were not called on to recite any creed, to profess any faith; but just as they were, in their helpless ignorance, were deemed fit to be folded to his embrace, and to be held up to us as our example.

"But not only does the child live in the present far more than it is possible for the adult, but there are besides other important mental differences between the two. Not merely is the mind of the child feebler in all respects than that of the adult, but in proportion to the feebleness of his reasoning power there is an exaggerated activity of his perceptive faculties, a vividness of his imagination. The child lives at first in the external world, as if it were but a part of himself, or he a part of it; and the glad-heartedness which it rejoices us to see is as much a consequence of the vividness with which he realizes the things around him as of that absence of care to which it is often attributed. This peculiarity shows itself in the dreams of childhood, which exceed in the distinctness of their images those which come in later life, and shows itself, too, in the frequency with which, even when awake, the active organs perceive unreal sounds, or in the dark at night conjure up ocular spectra; and these not merely colors, but distinct shapes, which pass in long procession before the eyes. This power fades away with advancing life, except under some conditions of disease, the occasional appearance of luminous objects in the dark remaining the only relic of this gift of seeing visions, with which, in some slight degree at least, most of us were endowed in our early years. The child who dreads to be alone, and asserts that he hears sounds or perceives objects, is not expressing merely a vague apprehension of some unknown danger, but often tells a literal truth. The sounds have been heard. In the stillness of its nursery the little one has listened to what seemed a voice calling it; or, in the dark, phantasms have risen before its eyes, and the agony of terror with which it calls for a light, or begs for its mother's presence, betrays an impression far too real to be explained away, or to be met by hard words or by unkind treatment.

"Impressions such as these are not uncommon in childhood, even during health. Disorder, direct or indirect, of the cerebral functions, more commonly the latter, greatly exaggerates them; and I have known them both to outlast for many weeks all other signs of ailing health after convalescence from fever. The unreal sights are far more frequent than the sounds. The sounds are usually of the simplest kind, as the tinkling of a bell, of which we all remember the exquisite use made by Hans Andersen in one of his nursery tales; or the child's own name at intervals repeated, just as the little watchful boy heard it in far-off Judea, when it was the prelude to a wondrous communication from the unseen world. It came to him as he woke from sleep, before the early morning dawned, while the lamp, lighted over night, was burning still; and still it is so far the same that these occurrences, which suggest to us problems that we can not attempt to solve, mostly take place at times of transition from the sleeping to the waking state. * * * * *

"But not only are the perceptions more acute in childhood than in adult life, but the sensibilities are more intense. The child's emotions, indeed, are often transitory—generally, indeed, very transitory; but while they last they produce results far greater than in the grown person. In the case of the latter, recollection of the past, anticipation of the future, or even the duties of the present control the overwhelming sorrow, or call forth the energies needed to bear it. The child lives in the present, and this present is but the reflection of the world around, its impressions uncontrolled by experience, ungoverned by reason.

"The broken-heartedness of a child on leaving home is not the expression only of intense affection for its friends or relations; it is the shock of separation from the familiar objects which have surrounded it; and I have not unfrequently seen children inconsolable when removed from homes that were most wretched, or from relations who were most unkind. * * * * * *

"This keenness of the emotions in children displays itself in other ways, and has constantly to be borne in mind in our management of them. The child loves intensely or dislikes strongly; craves most earnestly for sympathy, clings most tenaciously to the stronger, better, higher around it, or to what it fancies so, or shrinks in often causeless but unconquerable dread from things or persons that have made on it an unpleasant impression. Reason as yet does not govern its caprices, nor the more intelligent selfishness of later years hinder their manifestation. The waywardness of the most willful child is determined by some cause near at hand; and he who loves children, and can read their thoughts, will not in general be long in discovering their motives and seeing through their conduct.

"One word more I have to say with reference to that intense craving for sympathy so characteristic of the child. It is this which underlies the disposition to exaggerate its ailments, or even to feign such as do not exist, and in such attempts at deception it often persists with almost incredible resolution. Over and over again I have met with instances, both in private and in hospital practice, where the motives to such deception were neither the increase of comfort nor the gratification of mere indolence, but the monopolizing the love and sympathy which during some bygone illness had been extended to it, and which it could not bear to share again with its brothers and sisters. This feeling, too, sometimes becomes quite uncontrollable, and the child then needs as much care and judicious management, both bodily and mental, to bring it back to health as would be called for in the case of some adult hypochondriac or monomaniac.

"A caution may not be out of place as to the importance of not ministering to this tendency to exaggerated self-consciousness by talking of children's ailments in their hearing, or by seeming to notice the complaints they make as though they were something unusual or out of the common way.

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"I have lived among children, I have loved them as we all learn to love the objects by which we are all daily surrounded. I have seen their suffering and sorrow, and no explanation but one could ever in any degree solve the problem which it suggests. I have found it in the belief that he whom an old book speaks of as the Holy Child Jesus allows the young children, 'whom in Palestine he had blessed, once and forever, to pass through this only that they might meet the sooner.' The mystery of the suffering, indeed, is still in large measure incomprehensible, but an end is seen to it all; not the extinction of the weak for the sake of the strong, themselves to yield in turn to the stronger; the race being all, the individual nothing, but the perfection of each individual of the race; a perfection to be attained not here, but higher."

Certainly one whe writes in this way of children does understand them. And here we wish we could close our notice of this most attractive little volume, but we can not do so without adding a word of criticism of one point in the treatment of chorea recommended by the distinguished author. Dr. West advocates the use of emetic tartar in certain forms of this affection, and speaks of having given as much as nine grains of the drug in a day to a little patient for three successive days. For our part we can but believe that such practice is hazardous in the extreme in any and all forms of children's diseases. The patient may escape diarrhea, nausea, vomiting, and death, as did Dr. West's; but tartar-emetic in large doses, no matter how gradually the medicine is increased nor with what caution it be administered, is, according to most American experience, an excessively dangerous agent in children, and one which we should be glad to see banished from the materia medica of all little people. We are sure that we have seen at least one child fall a victim to what was ridiculously called "causeless" exhaustion, but what was certainly due to the contra-stimulant effect of antimony; yet the child neither vomited, nor did it purge, but it died outright, suddenly and of sheer exhaustion.

Dr. West restricts the exhibition of antimony to those cases of chorea in which "the movements seem to constitute the disease, and in which there is no special indication to guide us." Even in these cases—and they constitute a large proportion of the whole—we should much prefer giving the sulphate of zinc in increasing doses—the only remedy, by the way, which our author has found to exert anything of a specific power over chorea—or the methodical use of arsenic, a drug which Dr. W. does not so much as mention; or electricity, or anæsthetics, or frigorific mixtures to the spine; for we do believe that any one of these, even the last named, is better, as it is unquestionably safer, than antimony. With this single bit of fault-finding, we conclude with the remark that the work has afforded us an exceptional degree of both profit and pleasure.

A Century of Medicine and Chemistry: A Lecture introductory to the Course of Lectures to the Medical Class in Yale College. By Prof. B. Silliman, M. D.

Professor Silliman has departed from the usual course of professors in their introductory lectures. He has not been content to promise his students a rich repast of science, but has introduced them at the start to a substantial feast. He has hurried at once in *medias res*, and given them a compendium of knowledge which they will be glad to preserve for reference. We have never read an introductory lecture so full of valuable scientific matter, which is all the more timely as calling the attention of students of medicine to the dependence of therapeutics upon chemistry. This is forcibly exhibited in the following passage:

"If any one yet desires to ask what the century of chemistry now closing has done for therapeutic medicine, let him take up any formulary of a century old, and look for almost any of the more familiar articles which form the staple of medical practice to-day. He will find set forth in the pharmacopœias of a century agone, with the greatest prominence, such simples and carminatives as balsam of tolu, syrup of marsh mallow, camphor, red coral, Castile soap, ginger, worm-wood, James's powder, musk, mace, mummy, album græcum, powdered spiders, viper, millipedes, stomachic tincture, and aqua pura. Of the more potent medicines then known but little use seems to have been made. Iron and its salts, opium, mercury, jalap, and rhubarb were comparatively rare medicines. Peruvian bark finds its place among astringents, in which category fall also calomel and rhubarb. Burnt sponge is used as an alterative, in all innocence of iodine, which was as yet unknown for more than a generation. Alcohol seems to have been used chiefly for tinctures, and there is no class known as tonics. If we examine the prescriptions, it is difficult to say whether a feeling of amusement or disgust at the utter empiricism evinced is uppermost. Viper broth and spermaceti for consumption, oak-bark and gall-nuts for diabetes; musk, decoction of intestines of fowl, red coral, burnt rhubarb, chalk, etc., for diarrhea; tartar-emetic for hooping-cough; calomel and sulphur ointment for itch; are a few examples of the therapeutics of the leading physicians of London a century since. Not to do these worthy men the injustice to suppose that they dealt only in such extreme simples, it must be remembered that there was one form of iron which was an unfailing *vade mecum* and cure-all with them, and that was the *lancet*, with which they made their practice truly heroic."

Transactions of the Medical Society of the State of Pennsylvania. Sixth Series, Part II., 1871.

This volume of Transactions is the result of the twenty-second meeting of the Medical Society of Pennsylvania. The physicians of that ancient commonwealth were slow to organize a society, but these Transactions show that they are in earnest about sustaining it now that it has been set on foot, and their labors promise to make it worthy of a state which for so many years has cherished two of the largest medical schools in our country. Professor Gross, its retiring president, delivered an address to the Society, characterized by the learning and high devotion to his profession for which he is distinguished. We learn from this admirable address that the Society numbers nearly four hundred permanent members, and that it is migratory, never assembling two consecutive years at the same place; not the least of its many noble objects being the cultivation of good feeling among its members.

"Human nature," says Professor Gross, "is much the same everywhere." It seems that the medical society over which he presided is no exception to the truth of the somewhat trite remark. Its members, it appears from these Transactions, have their feuds; but we are glad to see but little space taken up in this volume with personal controversies. Dr. Turnbull reports six hundred cases of diseases of the ear; Dr. Lee proposes, in a short paper, a modification of Taylor's splint for posterior curvature of the spine; Dr. Squire suggests a new prostatic catheter; and to these succeed reports of the medical societies of seventeen counties in the state, the whole forming a volume of two hundred and fifty pages. We have not the space necessary to notice all these in detail, which, though varying in merit, form a body of medical literature that reflects great credit upon the Society. Indeed, one could not desire stronger proof than the volumes annually issued by this and other state medical societies of the progress of the profession in all that constitutes its true dignity.

A Hand-book of Therapeutics. By SIDNEY RINGER, M. D., Professor of Therapeutics in University College, Physician to University College Hospital. Second edition; 8vo, pp. 483. New York: Wm. Wood & Co. 1871.

Just a year ago we noticed the appearance of the first edition of Dr. Ringer's Hand-book, and testified our appreciation of its quality by making very copious extracts from its pages. In point of matter the work is indeed excellent; and though prepared specially for students and young practitioners, few physicians of any age can read it without profit. The style—if such it can be called—which our author uses, however, is anything but excellent; it is generally abrupt, often involved, frequently obscure, seldom good, and never equal to what we have a right to expect from a professor in an institution so renowned for its writers as University College.

The arrangement of that part of the work which relates to the action of medicines is that known as Buchheim's, which has the merit of convenience, and is perhaps as good as any other. Dr. Ringer has endeavored to make his book as practical as possible. He first states the symptoms or group of symptoms which suggest a medicine, and then tells the way to use it; omitting, with few exceptions, all speculative explanations as to how drugs cure. Much additional matter has been worked into the present edition, on which the publishers have done, in respect to paper, type, and binding, their full duty.

Transactions of the Ohio State Medical Society, 1871.

In point of mechanical execution this volume is the most tasteful that has come to us from any of the state medical societies. We had the pleasure of meeting the Medical Society of Ohio at Cincinnati last spring, and from the earnestness with which its members applied themselves to its business we were prepared to expect a rich volume of Transactions. It was impossible to doubt that men so much interested in the reading of papers had applied themselves industriously to their preparation. The result is what we expected. The matter of this neat volume is in keeping with its external dress. Every paper gives evidence of care and labor. The retiring president, Dr. Reamy, devotes a part of his address to that fruitful topic, the education of medical students. He may well declare it "a shame that, with all the opportunities at hand for becoming scholars, young men will present themselves at the portals of a learned profession without even a correct knowledge of their native tongue." He thinks a remedy might be found for this evil, but is not hopeful of its early application. Dr. Edward B. Stevens has a practical paper on some points in uterine therapeutics, which is followed by an elaborate one on physical and vital force, by Dr. S. S. Scoville. The antagonistic power of opium and belladonna forms the subject of an interesting report by Dr. John A. Little, which sets forth the doctrine in a favorable light. Dr. L. believes in this antagonism; but "poisonous doses of one," he says, "must be met by equally poisonous doses of the other." In a case of belladonna-poisoning quoted by him, a child six years old took, in a few hours, one hundred and twenty drops of laudanum and recovered; "in three hours was well and running about the room." Dr. Mussey reports a case of removal of both the superior maxillary bones. Sanitary science is treated of at considerable length and with great ability by Dr. J. R. Black. Dr. D. D. Bramble has an elaborate paper on hydrate of chloral, and Dr. W. W. Seely a report on ophthalmology. A report, by Dr. Bartholow, on the ophthalmoscope and the sphygmograph in the study of the physiological action of medicines; one by Dr. Whitaker, on reproduction; one by Dr. J. R. Black, on the prevailing diseases of Ohio; and one on the relations of epilepsy to insanity, by Dr. W. J. Conklin, follow, and are all instructive. Dr. D. S. Young contributes the last paper, which is on the mechanical treatment of stricture of the urethra.

What we have written conveys, we are well aware, a very inadequate idea of the merits of this contribution to American medical literature. In truth, we have not attempted to do this, for our limits forbid any full notice of the volume; but this meager account of its contents is enough to show how our brethren across the Ohio apply themselves to the duty of giving life and interest and dignity and weight to their medical society.

A Practical Treatise on Bright's Diseases of the Kidneys.

By T. GRAINGER STEWART, M. D., F. R. S. E., F. R. C. P. E., Physician to the Royal Infirmary, Lecturer on Clinical Medicine, formerly Pathologist to the Royal Infirmary, and Lecturer on General Pathology, etc. Second edition. New York: Wm. Wood & Co. 1871.

The first edition of Dr. Stewart's work appeared in 1868. It was the fruit of years of observation and study in the pathological department of the Edinburgh Royal Infirmary. It was pronounced to be "a real effort in the cause of curative medicine," "a very able and consistent attempt to set in a clear light the rather involved and difficult questions connected with the ultimate pathology of Bright's disease," and "deserving the attentive study of every physician who desires to be acquainted with the latest views on this interesting and important class of diseases." The present edition embodies the results of our author's further study of the diseases under consideration; and is enriched by additional information, especially in respect of clinical history and treatment, while numerous illustrative cases, and two new lithographs illustrative of important pathological conditions, have been introduced. The work is written in an easy, graceful style, and is without doubt the best book on the diseases which bear the name of the illustrious Bright which has yet appeared. It should be studied by every practitioner of medicine.

A Treatise on Human Physiology: Designed for the Use of Students and Practitioners of Medicine. By JOHN C. DALTON, M. D., Professor of Physiology and Hygiene in the College of Physicians and Surgeons, New York; Member of the New York Academy of Medicine, etc. Fifth edition, revised and enlarged, with two hundred and eighty-four illustrations. Philadelphia: Henry C. Lea. 1871.

A work which has reached its fifth edition, and become a text-book in twenty medical schools, stands in no need of any laudations of the press. Dr. Dalton's Physiology has indeed acquired a wide popularity, and is entitled to rank with the ablest treatises on the subject. Dr. D. is original as well as learned, and his readers will find in his book his own thoughts as well as those of the many other investigators who have enriched physiology by their labors. We hail it as one of the indications of an improved medical education that works ike Dr. Dalton's are so extensively read.

An Introduction to Pathology and Morbid Anatomy. By T. Henry Green, M. D., London, M. R. C. P., Lecturer on Pathology and Morbid Anatomy at Charing-Cross Hospital Medical School, etc. Illustrated by numerous engravings on wood; 8vo, pp. 260. Philadelphia: Henry C. Lea. 1871.

The strictly elementary character of the above work adapts it especially to the place it is intended to fill, and makes it a most helpful book for the student. It gives first a succinct, but for practical purposes a sufficiently complete, account of the general pathology of each morbid process, and subsequently describes the same process as it occurs in the several organs and textures of the body. The plan of the work is excellent; the style is simple and pointed. The wood-cuts are good, though mostly copies, principally from Rindfleisch's Pathological Histology, instead of being, as Dr. Green might have made them, original. We commend the work to our readers as being more than its title would imply—a mere introduction to morbid anatomy; "it is actually a condensed special treatise on general pathology."

Fireside Science: A Series of Popular Scientific Essays upon subjects connected with every-day Life. By James R. Nichols, A. M., M. D., Editor Boston Journal of Chemistry, etc. New York: Hurd & Houghton. 1872.

This is a very pleasing little work, which we can conscientiously recommend to our readers as abounding in matter interesting to all, and imparted in a popular and agreeable style. The origin and nature of springs, rebreathed air, chemistry of a cigar, the lost arts, the human hair, Michael Faraday, the clothing we wear, the skin and bathing, chemistry of the human body, infectious germs, the food of plants; these are some of the subjects treated of, and they are presented in a way to make them attractive to every fireside.

The book ought to be found in every family circle where there are young minds to be interested in the study of physical science. Dr. Nichols is master of the subjects of which he treats, and knows how to exhibit them in the best light. Readers of all ages and every class will derive pleasure and instruction from this volume, which, besides its substantial scientific merits, is one of great beauty.

Address: By Dr. P. O. HOOPER, President of the Arkansas State Medical Association. Pamphlet.

We have already made favorable mention of this address, and of the transactions of the society before which it was delivered. We believed the views of the president, Dr. Hooper, would attract attention; and we are glad to state that the signal officer of the Government has seconded the very valuable suggestion of Dr. H. concerning climatology. It is understood that the Secretary of War favors the increase of the force necessary to carry out our author's views, and in his report to Congress will endeavor to secure the necessary appropriation. As Dr. H. has very justly remarked, this matter of the climatology and diseases of each section "is an object worthy the attention and undertaking of a great government;" and he proposes that reports of these be consolidated and published under the direction of the surgeon-general of the army for the use of scientific medical men; and that the operations of the "signal corps" be so extended as to embrace every portion of the Union; that a station be located at the capital of every state and territory, and at other advisable places, from which shall be sent daily reports by telegraph, to the Federal capital, of the temperature, weather, currents of wind, ozonic state of the atmosphere, and everything of scientific interest to the physician and physicist.

Clinic of the Month.

HYPODERMIC MORPHIA IN TRAUMATIC ERYSIPELAS.—Prof. Estlander, of Helsingfors, states that he employed this injection originally in his clinical practice, in combination with the so-called abortive treatment (chiefly by means of tincture of iodine), mainly with the view of relieving the heat, tension, and pain of the inflamed skin. It was soon found, however, that the morphia must have exerted other effects also, so quickly was the course of the disease mitigated. It was therefore used in a series of cases as the sole local remedy, and the conviction became established that it must have exerted a direct influence on the inflammatory process, diminishing its intensity and arresting its progress. When the limits between the inflamed and healthy portions of the skin are not very clearly defined, and the process manifests itself in the form of large red spots gradually approaching each other, if we inject near the affected parts we usually find next day that the erysipelas has not extended farther, or has done so only to an insignificant extent. In cases in which the limits of the reddened and swollen skin are well marked, if we make some injections in its vicinity, we may find that the inflammatory process, which during the preceding twenty-four hours had made considerable progress, is sometimes at once arrested; but more frequently it continues in a diminished degree, gradually yielding in the course of a few days to a continuation of the treatment.

In the worst cases of erysipelas ambulans, as in the severe epidemic form, or where a peculiar disposition of the individual prevails, the morphia exerts as little effect as any other of the so-termed abortive remedies. In estimating how far the results depend upon the peculiar nature of the erysipelas itself, and how much they are ascribed to the injections, Prof. Estlander has undertaken many comparative trials, and he could relate many cases in which, while a rapid improvement followed the use of morphia, other cases treated at the same time, either expectantly or by means of other remedies, were much slower in their progress. Still he is too well aware of the capricious character of erysipelas to venture to deliver any categorical judgment upon the subject; but a five-years' experience has convinced him that these injections constitute a better mode of treating erysipelas than many other means.

For the injections, two grains of the chlorate or acetate of morphia are dissolved in a drachm of water; and as Luer's syringe holds about a quarter of a drachm, of which a quarter or a half is injected, it follows that the dose varies from one eighth to one quarter of a grain. As, so far from the erysipelas ever appearing at the small puncture wounds, these and their immediate vicinity are always represented by it, the dose may be distributed over different parts of the healthy skin, at a distance of one or two inches from the limits of the inflammation. Usually the injection is made only once in the twenty-four hours.

Prof. Estlander has no intention of proposing this as an exclusive method of treating erysipelas, believing, on the contrary, that one of its advantages is that it admits of the simultaneous use of other means. He has tried, indeed, all the various other remedies which have been recommended, and regards the tincture of iodine as the best of these. As soon as from shivering and the appearance of the wound erysipelas seems threatening, he administers an emetic, a means which he believes is nowadays too much neglected, and one which he believes conduces to moderation of the disease. The morphia is next injected, either as the sole means or in conjunction with a daily painting with iodine, employing afterward wadding and compression by a roller where practicable. Ipecacuanha, with phosphoric or sulphuric acid, may afterward be administered. The sesquichloride of iron, once regarded as a specific, is of no real utility. *(Deutsche Klinik.)*

THE RATIONAL TREATMENT OF THE ACUTE EXANTHEMATA, AND ESPECIALLY MEASLES AND SCARLET FEVER.—The following *résumé* of an article by Dr. Ottmar Hofmann, of Marksteft, we copy from the Practitioner. The first and most important requirement, he says, "of a rational treatment of any disease consists in the removal of its causes. Unfortunately in the case of many diseases this is impracticable, either from our not being acquainted with the nature of the cause, or that the cause is due to certain conditions of the life of the patient, from which it is impossible to withdraw him. In such cases we must rest contented with an expectant line of treatment, or treat symptoms as they arise. The advance of science, however, is continually enabling us, by improving our knowledge of the causes of disease, to treat it in a truly rational manner. Thus the carefully made aad important researches of Prof. Hallier into the nature of the contagions of infectious diseases, so long obscure, have clearly shown that they are of a vegetable nature, and indeed are true fungi, which, by their introduction into the body and subsequent multiplication, generate the diseases in question." Dr. Hofmann forbears to enter into a consideration of the prophylaxis of measles and scarlet fever, considering this to be a matter of medical policy, and to consist essentially in the purification of dwelling-houses and the removal of all excrementitious matters which form the fruitful soil for the generation of these fungi. In all cases he supposes the disease to be present, and the practitioner has to deal with the parasitic organisms after they have gained entrance into the body. Now, in such case it is necessary either to render these parasites harmless by the administration of certain remedies which are capable of killing them, or we must seek to eliminate them from the body as soon as possible. The treatment of these affections by means of the most varied remedies has demonstrated satisfactorily enough that we know of no remedies capable of neutralizing the poison of measles or of scarlet fever—that is to say, of killing the cells of the fungi; and even if, as the beautiful researches of Binz appear to show, we possess in quinine a substance capable of exerting a favorable influence on the acute exanthemata similar to that which it has been demonstrated to have in typhus, still it can scarcely be administered in doses sufficiently large, especially in children, to destroy the life of the fungi, as Binz himself admits, while the somnolence of the patients in the severer cases, which most resemble typhus, renders the introduction of the medicine quite impossible. On these grounds it seems desirable to adopt the other plan, and to promote the discharge of the fungi from the system as rapidly as possible. With this object in view, the plan of the late Dr. J. Steinbacher, of lowering the temperature of the body—that, namely, of rolling the patient up in sheets wrung out of cold water, and surrounded by a woolen cover or dry sheet—in which condition he is allowed to remain for some time. The first effect of this proceeding is to powerfully excite the whole nervous system. Heat is withdrawn from the body in proportion as the temperature of the skin and that of the wet cloth approximate, and this again leads to a steady flow of the internal temperature toward the skin. If the body remain enveloped for a still longer period, so that the temperatures of the body and of the cloth have become equalized, a more or less abundant excretion of sweat occurs as a result of the cutaneous hyperæmia. On this increased excretion of sweat Steinbacher lays special stress, contending that by its means the special poison of the disease is eliminated from the body. In order to determine whether this supposition be correct, M. Hofmann treated a child of four years of age, suffering from a severe attack of measles, in the hydropathic fashion, but placed upon its chest a fine piece of linen; and after the child had lain for two hours in the wet cloth, and had perspired freely, the piece of linen was removed, and the sweat expressed from it received into small tubules. These were transmitted to M. Hallier at Jena, with a request that he would examine them and report on the presence of micrococcus. The reply was that the micrococcus was abundant in the fluid; and Prof. Hallier at once instituted experiments, the results of which are not yet published, to determine whether this micrococcus will propagate the disease of measles. If this be found to be the fact, it will tend to show that the hydropathic plan of treatment is well adapted for the rapid removal from the body of the parasitic organisms. M. Hofmann states that he has adopted this method of treatment with good results in many severe cases of measles and scarlet fever, even when the patients were in the first instance comatose; and has observed not only that the febrile symptoms are rapidly subdued, but that the convalescence of the patients is much quicker than under other plans of treatment. The particular mode in which M. Hofmann applies the wet cloths is perhaps worthy of being here inserted. In those slighter cases, he says, in which the temperature of the body measured *in ano* does not exceed 40° C., and the brain is clear, he envelops the patient only from the axilla to the hips in the wet cloth, which is thus applied. The patient is made to sit up, and a folded towel is spread across the bed behind the back; an equally broad and long soft linen cloth, folded six or eight times and wrung out of cold water, is placed on this, and is again covered by a fine piece of cambric or muslin. The patient is then told to lie back, and the cloth is folded as close round the patient as possible and secured by a bandage. The dry cambric next the skin is only to prevent the disagreeable impression of cold, and children make no complaint. The patient is retained in the wraps for one or two hours, according to the temperature, and they are then reäpplied, freshly dipped in cold water; and this is applied till the temperature of the body falls to 38° or 38.5° C., which usually happens in from two to four days. He then directs the patient to use a warm bath daily to promote desquamation, and considers him well in about eight days. In more severe cases, where the temperature of the body rises above 40° C., and comatose symptoms are present, he envelops the patient in from two to four wet cloths, and covers these with wool. In the early period they are only allowed to remain on for fifteen or thirty minutes, and are then renewed after the lapse of one or two hours. Subsequently, in order to promote perspiration, they are allowed to remain longer in the cloths—that is to say, for one or two hours—and they are applied less frequently, as from two to three times daily. As often as the patient is removed from his envelopes, in order to maintain the cooling effect, the whole body is sponged freely with cold water, or, if the comatose symptoms are well marked, he is placed in a bath of lukewarm water, and cold water poured over him till slight shivering is induced. He is then quickly removed to bed, and as soon as the temperature has again risen the whole procedure eat is reped. As the febrile symptoms diminish, the method of partial investment above described is adopted. A good deal in respect to the temperature of the water in which the cloths are dipped, the length of time and the frequency with which they are applied, must necessarily depend upon the age and strength of the patient, the degree of the fever, and the discrimination of the medical attendant; while judicious medicamentation (though but little of this is required in slight and uncomplicated attacks of measles and scarlet fever) is in some cases a very necessary adjunct to the hydropathic plan of treatment.

Indications for employment of the Catheter in Old People.—M. Guyon, of Hôpital Necker, lately remarked that retention of the urine is very common in old men, depending generally on affections of the bladder, or of the neck of the bladder, or of the prostate. Many cases of supposed vesical paralysis are in reality due to prostatic disease. Retention of urine in old people displays itself by symptoms that are eminently variable. Sometimes these symptoms are strongly marked: the patients require to micturate frequently, and in doing so experience pain and burning heat which lasts for a long time; there may even be constitutional and febrile symptoms. In other instances, again, the symptoms are by no means prominent, especially in those cases where the bladder is but little contractile; the retention is then only indicated by percussion, palpation, and catheterism, the latter alone in many cases being reliable evidence of its presence. But this indication that catheterism should be adopted as an exploratory means is somewhat delicate; for the operation is not always inoffensive, and the patient suffering but little, subsequent troubles may be attributed by the patient or by his friends to the injudicious interference of the surgeon. If, however, the symptoms be well marked, then there is no room for hesitation; and M. Guyon even goes so far as to say that the catheter should be passed in the case of every old man who evacuates the contents of his bladder imperfectly. He thinks that it is not necessary it should enter the organ on the first occasion, since, if only introduced as far as the neck, it habituates the tissues to the contact of instruments, and indicates, in part at least, the seat of the disease. Stoppage of the flow of water is always a serious symptom in old people; and the best advice that can be given to them is to be sounded, either with a simple sound or with a catheter, and that frequently. Indeed, if relief be not speedily afforded to such patients, dangerous symptoms soon make their appearance in the form of rigors, purulent urine, and violent reäction.

Purely medical treatment is of no service in such cases, and he gives an instance in point. In 1869, in the month of September, M. Guyon had in his wards a man, aged forty-eight, who, after having been treated by ordinary remedies and by rest, left the hospital, but returned in January, 1870. He was now suffering from orchitis and distinct enlargement of the prostate; he passed water frequently; the urine was thick, but was voided in sufficient quantities to lead to the belief that the bladder was thoroughly emptied. On the 1st of February there was some fever present, and on the catheter being introduced about four ounces of urine were drawn off, and on a second occasion about six ounces. He was sounded four times, and then told to sound himself. No other treatment was adopted. On the 7th the urine was clear yellow, and on the 15th he was able to remain five hours without urinating. Catheterism, practiced in his case twice a day, caused no return of the epididymitis. In another case, occurring in a dyspeptic subject, all the symptoms of cystitis were present. For a long time M. Guyon hesitated to sound him, and for two months he was treated medicinally without effect. At length he was catheterized, and the urine drawn off. The symptoms immediately diminished in intensity, and from this moment the urine, which had up to that time been troubled and imperfectly discharged, became limpid and even entirely evacuated. A third patient passed blood, and was obliged to remain in the recumbent position. After careful exploration, M. Guyon recognized the existence of retention of urine, and passed a catheter. From this time all the symptoms of stone of which the patient complained disappeared. Thus not only the stoppage of the flow of water occasions grave accidents, but it simulates other diseases; it causes alterations of the walls of the bladder, and provokes cystitis. When the bladder is greatly distended, however, it is imprudent to evacuate it completely. The frequency with which catheterism should be repeated is an important question. No absolute rule can be laid down, but it may be performed every five hours; but commonly the instrument should only be passed when there is intense desire to urinate. If, however, he experience but little or no inconvenience, it should be passed at regular intervals. As a rule, the permanent retention of the catheter in the bladder is to be avoided, except perhaps in cases where the desire to pass water is very intense and frequent, or when the introduction of a catheter is very difficult. M. Guyon cites a case where it was worn for two years. It should in general be fixed in position till the bladder is habituated to catheterism. As adjuvants to the above treatment, injections may be employed, which may be hot, cold, or medicamented, as occasion may require. *(Lucas-Championniére's Journal de Médicine—Ibid.)*

TREATMENT OF SCROFULOUS ANGINÆ.—In an article *(ibid.)* on the diagnosis and treatment of scrofulous anginæ by Dr. E. Isambert, of Paris, who has devoted himself especially to the study of throat diseases, we find the following summary of the treatment: 1. Abstinence from a mercurial treatment, or where there exists a positive mixture of syphilis and scrofula a careful employment of that treatment, alternating with considerable periods of rest, during which iodide of potassium or of iron may be employed. 2. Speedy employment of the general treatment of scrofula: cod-liver oil in large doses, iodide of iron, cinchona, wine, tonic nutriment, exercise in the open air, sulphurous baths. 3. Persevering employment of local treatment by means of the laryngeal sponge, tincture of iron, either pure or mixed with opium. The ethereal tincture of iodoform, chloride of zinc, or concentrated chromic acid, may be applied to the diseased surface. Chromic acid is admirably borne by the mucous membrane of the mouth, pharynx, and even larynx. It exerts a highly powerful action in œdema of the glottis in strongly astringing the membrane, and thus warding off the need of tracheotomy. Perchloride of iron has been employed especially in cases of bleeding ulcers. Nitrate of silver does not seem to be of much benefit unless when applied with the object of hastening the cicatrization when already in good progress. Various powders may be blown upon the surface, especially iodoform powder mixed with lycopodium. Local douches made with the irrigator may be very useful, and exert an anodyne action in painful cases. In respect to pulverized fluids, he considers their effects to be insufficient in such grave lesions. The most important point of all is to form as early as possible a correct diagnosis, so as to institute a rational treatment, and avoid hesitation, loss of time, and above all weakening measures, which are absolutely contraïndicated.

SKIN-GRAFTING.—G. E. Legge Pearse, Esq., one of the surgeons of the Westminster Hospital, London, advocates *(ibid.)* the use of larger pieces of skin for transplanting than recommended by Mr. Pollock and others. He says he has generally noticed that when the particles of skin are so very small that, especially in cases where there is copious secretion of pus, they are liable to be washed away, that adhesion is not so likely to take place, and that the operation, though performed with great care, is often of no avail. He has therefore of late found it better to take small elliptical pieces of skin, about half an inch in length by one third in breadth, by pinching it up with dissecting forceps, and snipping it off with the scissors; the piece not consisting of the whole thickness of the skin, so that there may be no bleeding from the part whence it is removed. The little white tender spots from which the skin has been taken he usually touches over with collodion, and in a few days they are quite well. The portions of skin are laid on the healthy granulating surface, care being taken that no blood or pus intervenes; a piece of gold-beater's skin is then laid over the wound to exclude the air and retain the fragments in position, as recommended by Mr. Pollock. He finds great advantage in covering this with a piece of lint spread with simple ointment, as the greasy application materially assists in the removal of the dressings, preventing them from adhering to the surface of the wound, and so tearing off the pieces of new skin, an unfortunate result which he has more than once observed.

IODIDE OF POTASSIUM IN SYPHILIS.—In the *All. Wien. Med. Zeit.*, Dr. Kraus speaks on this subject as follows: "If the circumstances of the patient, and especially the condition of his digestive organs, do not permit, or he be of a scrofulous or tubercular diathesis, so as not to be fit for mercurial treatment, or if he be anæmic, or mercury have already been tried in vain, then preparations of iodine, such as iodide of potassium, syrup of the iodide of iron, or iodized cod-liver oil, are admirable remedies in bringing even severe symptoms to a safe termination. These preparations also assist in old cases the methods of mercurial treatment already detailed. Of altogether remarkable service is iodide of potassium in syphilitic periostitis, tophi, and gummata, or knotty infiltrations of the skin or mucous membrane, in ulcers which resemble lupus, and in visceral syphilis, as also in hereditary syphilis in grown-up persons." It can not, however, be denied, says Kraus, that these same symptoms may disappear under the influence of a careful use of the inunction cure. He has recently seen several cases of hereditary syphilis, which had been treated for months with the iodide without success, which gave way in the most notable way to inunction cure. He cites, among others, the case of a girl of twenty-five years of age, who was affected with hereditary syphilis in the form of knotty ulcerated spots on the skin of the left ankle. She was treated with iodide of potassium in vain. The ulcers were, in spite of caustics and careful dressing, only made to heal eventually when the girl was put under the inunction cure. It is remarkable that these gummata are not seldom the only appearance of hereditary lues. A few years ago he saw a lady of about thirty-two years of age who for five years had suffered from an ulcerated gummy tumor on the left ankle, and been treated by all kinds of remedies in vain. After thirty-six inunctions the ulcer was healed, and she became stronger in health. The formulas used by Dr. Kraus are three grammes of iodide to 156 grammes of water; dose, two table-spoonfuls twice daily. Cod-oil, 150 grammes, to which is added .05 grammes of pure iodine; a table-spoonful thrice daily. Hebra gives the iodide in doses of one gramme daily, raising this .25 every week until 1.50 grammes a day are taken, and then the dose is lessened again.

Sulphur baths are injurious, says Kraus, in early syphilis. They are only useful in syphilitic and mercurial cachexia. Hydropathy will not cure true syphilitic eruptions; but in cases where syphilis is quelled it does good to the general nutrition, and is useful in mercurial cachexia. A mild methodic water-cure often does much good in syphilis of the brain and spinal-cord, accompanied by paralysis; but iodine and its preparations should also be used. All rational hydropathic physicians are accustomed to treat their patients in this way, and Dr. Winternitz, of Austria, has admirable results in such cases. Sea-bathing is useful in syphilitic bone disease. Syphilization has been everywhere abandoned as a remedy for syphilis.

THE PRACTICAL VALUE OF NITRITE OF AMYL.—Mr. Townsend, president of the Bristol Pharmaceutical Society, said, in his recent address before that body, in reference to the uses of the nitrite of amyl: "Its peculiar physiological power of checking oxidation and lowering temperature suggests its use in fevers, when it is desirable to lessen the rapidity of the tissue changes. Its action upon the nervous and circulatory systems would, however, very possibly do more harm in a low fever than its other powers would do good. I have, however, no clinical evidence to offer, and therefore the matter must be left as a simple suggestion. There is one disease in which theoretically it ought to be of great value; *i. e.*, tetanus. There is scarcely any doubt but that there exists in that affection a condition of exalted functional activity of the reflex motor centers, and of these centers the nitrate is a powerful depressant. Moreover, in many cases of tetanus there is an enormous rise in the activity of oxidation, and consequently of temperature of the body, so that the nitrite would meet a second indication. Clinical evidence also is not altogether wanting, and, although not enough to warrant any conclusion, is sufficient to encourage further trials. In regard to the method of administration, I am not aware that the nitrite has been given otherwise than by inhalation. Its totally insoluble and highly volatile nature renders it unfit for exhibition either in solution or mixture, but I do not see why it could not be given dropped upon a piece of sugar. In cases of tetanus it seems plausible that the remedy would be more efficient if given by the stomach in frequent small doses. When it is to be inhaled, five drops should be placed upon a handkerchief and held close to the nostrils, the pulse being closely watched and taken as a guide for the continuance or withdrawal of the drug. If necessary, the dose should be repeated. When giving it by the stomach I do not think it would be safe to start with more than two drops, until the effects of the medicine so administered have been more studied than at present. Nitrite of amyl is without doubt a powerful agent in its action on the economy, and yet my experience with it on animals would seem to show that with proper care, and a due understanding of its physiological action, it is a safe remedy. By this is meant that it does not act unexpectedly and out of proportion to the dose. I have never seen indications of anything such as constantly happens in the use of chloroform upon dogs: sudden arrest of the heart's action, unexpected death, the mysterious production of symptoms apparently out of proportion to the amount given. On the other hand, I have frequently been astonished at the ease with which very serious symptoms have been shaken off, the animal reäcting rapidly from a condition on the very border lines of death."

THE SIGNIFICANCE OF UTERINE AND VAGINAL DISCHARGES. In a recent clinical lecture (London Lancet) on this subject, by Dr. Robert Barnes, that distinguished authority divides the discharges after their excretion as follows: 1. Sanguineous; 2. Mucous; 3. Purulent; 4. Watery; 5. Membranous; 6. Solid or fleshy; 7. In the case of fistulous openings into the bladder or rectum, urine or fæces may escape. 8. Then there are foreign matters, fluid or solid, which find their way into the uterus and vagina from without. Among these may be mentioned semen distinguished by spermatozoa.

He then says of all the discharges, the only one which can be called strictly normal is blood; and this is only normal within certain conditions of circumstance, time, and quantity. Previous histological study will lend the most material aid to direct observation in determining the sources and significance of discharges. We may start from the proposition that, with one or two rare exceptions, all the discharges we have to deal with come from mucous membrane, or at least from organs normally clothed by mucous membrane. The discharges will generally bring with them some of the distinctive elements of the part of the mucous tract from which they are secreted. Hence microscopical examination of a discharge will almost always reveal epithelium-cells, which tell their own tale as to the region they come from. In this way we can distinguish uterine mucus from vaginal. The whole genital tract secretes mucus. It is only when excessive in quantity or altered in quality that the secretion of mucus acquires a pathological significance.

The natural mucous secretions are: 1. A whitish mucus from the Fallopian tubes and cavity of the uterus proper. This probably comes principally from the uterine glands. It has an alkaline reäction. It is distinguished under the microscope by the presence in it of columnar ciliated epithelium-cells. In health this secretion is moderate in quantity, and attracts no attention; but in the condition known as uterine catarrh it is very abundant; sometimes, especially in aged women, accumulating in the uterine cavity, and causing colic pains to expel it. The uterine mucous membrane may also be stimulated to excessive secretion by gonorrheal infection spreading from the vagina. 2. A transparent viscid mucus in the cervix uteri. This is also alkaline. It consists chiefly of mucous corpuscles, caudate corpuscles, minute oil-globules, and occasionally dentated epithelium, all entangled in a thick tenacious plasma. In health this secretion is rarely formed in such excess as to appear externally, but it is almost always found in the cervix filling up the canal. The mucous plug thus formed is washed away at each menstrual flow. It exists generally throughout pregnancy. Its uses are probably to shut off the uterine cavity, so as to protect it from external agencies, and to form a suitable medium for the passage of the spermatozoa. At the beginning of labor this secretion is formed in increased copiousness, and serves to lubricate the passages and to facilitate their dilatation. In certain morbid conditions the cervical glandular structure also acquires extraordinary activity, and then the proper cervical mucus assumes the character of a *discharge*. It is poured in large quantity into the vagina; so freely indeed as to be a serious drain upon the system, and a source of weakness. It constitutes the most frequent form of so-called "whites" or leucorrhœa. If the speculum be used, it may be seen issuing from the os uteri as a glairy, albuminous fluid, resembling unboiled white of egg. This exaggerated secretion is almost always the consequence of inflammation, more or less acute, of the cervical canal, endocervicitis, or of a condition analogous to catarrh of the bronchial or intestinal mucous membrane. 3. A mucus consisting of plasma, not viscid, but containing multitudes of scaly epithelium-cells. This comes mainly from the external surface of the cervix uteri, labia uteri, and the fundus of the vagina. It is of acid reäction. The proportion of epithelial cells to that of the fluid plasma varies considerably. In some cases the fluid part is so scanty that the secretion adheres to the mucous membrane, covering the os uteri as with flakes, or a layer of opaque yellowish-white friable membranous-looking substance, simulating and suggesting diphtheria. Under the microscope this is found to consist almost entirely of scaly epithelium and oil-globules. In other cases, the plasma being a little more abundant, the secretion looks like cream or pus; but in these cases the microscope reveals the same constituents; namely, scales of epithelium. These forms of secretion depend upon chronic or subacute inflammation of the mucous membrane, vaginitis, not necessarily accompanied with abrasion or ulceration. The puriform mucus, more or less opaque and viscid, varying in tinge from creamy-white to yellowish or light green, is often due to gonorrheal infection, or to suppuration from surfaces denuded of epithelium and granulating. When due to gonorrheal infection, the mucous membrane from os uteri to vulva is swollen, angry-red, and painful, and the meatus urinarius partakes of the same character. The creamy form of secretion is frequently found during pregnancy on the vaginal portion of the uterus. It is the result of the active throwing off of squamous epithelium due to hyperæmia. 4. The remaining or lower tract of the vagina secretes an acid mucus. Under morbid states this sometimes contains pus-globules, an infusorium, the Trichomonas vaginalis of Donné, and a fungus, the Leptothryx buccalis of Robin. But these parasites are really mainly due to neglect of cleanliness. Whitehead suggests that the use of the acid of the vaginal mucus is to prevent the coagulation of the catamenial fluid in the vagina. It certainly seems to possess the property of coagulating the alkaline mucus coming from the cervix. I doubt the correctness of Whitehead's theory. It is important that the blood should not coagulate in the uterus, because clots there cause severe pain and congestion, and are apt to keep up hemorrhage; but a clot in the vagina is of little consequence. Pus stops coagulation; so does mucus, provided the proportion of blood is small. I believe it is the normal mucus which maintains fluidity. Whenever the proportion of blood is greatly in excess it is apt to coagulate. 5. There is a clear viscid secretion from Bartholini's glands, which is discharged in jets during copulation. It has been seen to escape on irritation, expelled by the action of the muscular fibers in the ducts. It is also poured out freely during labor, serving to lubricate the vulva. 6. The small sebaceous and mucous glands of the vulva and labia majora secrete an oily mucus serving for lubrication. This is sometimes increased in quantity, becoming puriform.

We may here refer very briefly to one or two other points connected with the mucous discharges. Donné says when the acidity of the vaginal mucus, or the alkalinity of the uterine secretion, is morbidly exaggerated, the spermatozoa are killed. Hence one explanation of the frequency of sterility when there is inflammatory disease of these parts, and of the recurrence of pregnancy when the disease which gives rise to the morbid secretions is cured.

There is a form of leucorrhœa not uncommon in scrofulous children. In such subjects all the mucous membranes are apt to be excessively developed and active. The discharge is chiefly, if not entirely, vaginal and vulval. It is important to bear in mind these sources of leucorrhœa in children, lest we fall into unfounded suspicions that may be suggested to us by others.

Many discharges which to the naked eye can not be distinguished from pus are really mucus. The microscope discriminates them easily. The distinction is important, because it is generally true that the unbroken mucous membrane of the genital tract does not yield pus. When true pus appears, it is therefore mostly an indication of erosion, ulceration, or abscess. The matter is found to be only epithelium, though it may have a thoroughly purulent appearance. The intestinal mucous membrane rarely produces pus without ulceration. The mucous membrane of the uterine tubes, which is often covered with a thick mass of entirely puriform appearance, shows almost always only epithelial elements. On other mucous membranes — the urethra, for example — we observe copious discharges of pus, without the least ulceration.

The purulent discharges. When pus-globules in large proportion are found, they indicate generally a breach of continuity of the mucous surface; that is, a granulating or ulcerated surface. When pus escapes in quantities, suddenly at intervals, and sometimes by continuous draining, the source probably is an abscess whose seat is outside the uterus or vagina, as in what is called pelvic cellulitis, opening into the vagina. In such a case examination by touch internally, and externally in the iliac regions, will reveal the extraüterine disease. The uterus will be felt set fast by surrounding firm plastic effusion. The os uteri will generally be found in the center of the pelvis, low down, or inclined to one side, if the pelvic peritonitis is chiefly unilateral. This position of the os uteri distinguishes pelvic peritonitis from retroüterine hematocele, which pushes the os uteri forward, close behind, and sometimes above, the symphysis pubis, and which may also be attended by suppuration.

I have now under my care a case in which pus is voided by the vagina, the origin of which is an abscess in the left hypochondriac region opening into the intestine, and which at a lower part has formed a fistulous communication with the vagina. You thus see how numerous and strange are the sources of pus in the vagina, and that a purulent discharge is no sure evidence of disease of the uterus or vagina. Your exploration must extend beyond these organs.

Notes and Queries.

EXTRAORDINARY FECUNDITY.—Dr. Edward Mason reported at a late meeting of the Elmore Medical and Surgical Society, Wetumpka, Ala., a case in which "a lady bore seventeen children in nineteen years, twice giving birth to twins," and once producing four children at a birth. The latter died, but all the other thirteen survived.

QUININE AS AN ABORTIVE.—At the same meeting Dr. L. S. Green reported some cases in which he was satisfied that sulphate of quinine had induced abortion. To guard against such an accident, he combines opium with the quinine.

ALUMNI SOCIETIES.—The graduates of the Missouri Medical College have resolved to add another to the number of these commendable associations. Those who have inaugurated the movement hope that the society will embrace in time every living graduate of the institution. Its first meeting and banquet will take place in St. Louis on the 6th of this month. We had hoped before now to see an alumni society of the University of Louisville. When will its pupils, counted now by thousands, move in the matter?

KENTUCKY STATE MEDICAL SOCIETY.—The time for the meeting of this Society is the first Tuesday in April, and the place Louisville. A full and spirited meeting is expected. Delegates will be at the meeting from the medical societies of Ohio and Indiana, and perhaps other states. The profession of Kentucky owes it to itself to turn out in force. Louisville will be largely represented at the meeting.

New Elixirs.—The following has been furnished by that excellent pharmaceutist, Dr. Thos. E. Jenkins. We commend the new elixirs as being superior to the syrups recommended by Dr. Richardson, of London, and which have been for some time in use in this city:

"We are now making the following new preparations, namely: Elixirs of bromide of quinine, bromide of morphine, bromide of quinine and morphine, bromide of strychnine, bromide of quinine and strychnine, bromide of iron, bromide of quinine and iron, bromide of calcium; average dose, one tea-spoonful. These preparations are very carefully made, and contain no sulphates. They are rendered very much more palatable than the syrups, and are better tolerated by the stomach. Jenkins & Walker."

National Medical Journal.—The February number of this able journal contains the following card from its editors, Drs. Busey and Lee:

"The proprietors and publishers having claimed the right to publish matter which the editors did not approve, the undersigned have withdrawn from any further connection with the editorial department of the journal. They are not responsible for any article in this number which appears after the essay, by Dr. Mackall, on cerebo-spinal meningitis."

It is to be hoped that the difficulty between the editors and publishers of our valuable cotemporary will be adjusted, and its publication under its former excellent management at once resumed.

AMERICAN MEDICAL ASSOCIATION.

Annual Meeting.—The twenty-third annual session of the Association will be held in Philadelphia, May 7, 1872, at eleven o'clock A. M. Reports will be made by committees on subjects specially assigned, and other business will be transacted as in previous sessions. Physicians desiring to present papers before the Association should observe the following rules:

"Papers appropriate to the several sections, in order to secure consideration and action, must be sent to the secretary of the appropriate section at least one month before the meeting which is to act upon them. It shall be the duty of the secretary to whom such papers are sent to examine them with care, and, with the advice of the chairman of his section, to determine the time and order of their presentation, and give due notice of the same."

The following are the secretaries of sections: *Chemistry and Materia Medica*—Ephraim Cutter, Boston; *Practice of Medicine and Obstetrics*—Benjamin F. Dawson, New York; *Surgery and Anatomy*—W. F. Peck, Davenport, Ia.; *Medical Jurisprudence, Hygiene, and Physiology*—E. L. Howard, Baltimore; *Psychology*—John Curwen, Harrisburg. Secretaries of all medical organizations are requested to forward lists of their delegates, as soon as elected, to the permanent secretary. Other information can be obtained of the permanent secretary, Dr. W. B. Atkinson, 1400 Pine Street, Philadelphia. Railroad and hotel arrangements announced at an early day.

AN ANNUAL EXHIBITION FOR THE PHILADELPHIA MEETING OF THE AMERICAN MEDICAL ASSOCIATION.—The undersigned, Chairman and Secretary of the Committee of Arrangements of the American Medical Association, have been authorized to invite attention to the project of an exhibition of objects interesting to the medical profession, to be held in Philadelphia during the next session of the Association. This exhibition has been suggested as a desirable amplification of what has been customary on these occasions, and is expected to resemble, more or less, the displays of this kind which are the prominent features of the annual meetings of the British Medical Association.

The aim of the committee will be, in this attempt, to provide for the practical and scientific entertainment of the members of the Association. Their design is to form a collection of instruments, apparatus, specimens, preparations, models, drawings, plates, books, and all other proper objects that may be obtained or presented in good time for the purpose; and so to arrange it for exhibition as to bring it under the convenient observation of every delegate and professional visitor. They hope in this manner, without any sacrifice of the usual regard for their guests, to give to the arrangements as much of a professional character as may be in their power. Their desire is to aid in advancing the practical interests of the Association by affording, through an always useful channel, some more direct means, as well as signs, of technical and scientific progress, as an attractive addition to the ordinary routine of written and verbal communications and discussions.

They can not promise much success in a first experiment, undertaken at unavoidably short notice, beyond that of the pioneer in preparing the way for something better in the future, in the light of experience, and with more time and opportunity for concerted action. The original intention was not to venture beyond Philadelphia and the neighboring cities in the search for material; a restriction which seemed to be required by the limited space at the disposal of the committee, and the consequently greater difficulty of selection from the larger number of objects likely to be offered in answer to a general call. Nor was it doubted that a notification of the contemplated arrangement to the societies and schools represented in the Association would obtain sufficient attention to secure at least one object of the committee in encouraging a general desire to develop and produce the largest amount of illustration, as well as evidence, of professional improvement. Further consideration, however, has led to the present announcement; so that exhibitors from more distant parts of the country may have an opportunity to send their contributions; mainly for the benefit, however, of the members of the Association, for whose especial information and entertainment the exhibition is to be prepared.

No mere display of local wealth and variety of means and appliances, or of individual superiority, will be encouraged beyond what is entirely incidental to the general purpose; nor will there be any attempt on the part of the committee to present representative or historical collections, although such collections may be cordially welcomed. Competition and completeness, therefore, are not to be expected. No special reports or comparative statements need be looked for; nor will the committee be responsible for the merits or demerits of the several objects exhibited, although obliged to exercise control as to admission and location. Novelty, recentness, and practical character will necessarily have weight in determining precedence; but not at the expense of whatever may be deemed especially characteristic or interesting, whether old or new. In a word, under their limitation of time, space, and means, they can not undertake a general exposition or an industrial fair. Further and more specific details will be published as soon as practicable.

The committee confidently hope for encouragement and assistance in an early practical response from their professional brethren, and from others who may have objects of interest to offer. They are bound to remind all concerned, however, that the contemplated collection must of necessity be, as much as practicable, select and characteristic rather than varied and extensive. It ought to be comprehensive, but can hardly be very full.

EDWARD HARTSHORNE,
D. MURRAY CHESTON.

AMERICAN MEDICAL ASSOCIATION.—We extract the following from the Philadelphia Medical and Surgical Reporter:

"The arrangements for the meeting of the American Medical Association in this city, we are glad to learn, are progressing satisfactorily. Arrangements have been completed with all but one or two of our hotels for a decided reduction in the price of board per diem. Most of the railway and steamboat lines throughout the country will make a material reduction in their charges, some of them giving return tickets free to those who hold a certificate from the permanent secretary. These certificates will be obtained of the secretary during the session of the Association.

"It is the wish of the Committee of Arrangements to make the approaching meeting a success in a literary and scientific point of view, and to this end it is hoped that volunteer papers of *real practical value* will be presented on various subjects by members of the profession from all sections of the country. There is no class of physicians who are more capable than many of our country practitioners of giving experiences and observations of value from every-day practice. Those who propose to send or bring papers should notify the permanent secretary, Dr. W. B. Atkinson, 1400 Pine Street, this city, as early as possible, giving title and probable length of paper, as ten, fifteen, twenty minutes, etc., as the case may be."

REUNION OF THE ALUMNI OF THE JEFFERSON MEDICAL COLLEGE.—The Alumni Association of the Jefferson Medical College proposes to hold a social reunion during the meeting of the American Medical Association in Philadelphia in June next. The alumni of the College are cordially invited to attend. Those who contemplate being present are requested to send their names and addresses to either of the undersigned secretaries.

J. EWING MEARS, M. D.,
222 South Sixteenth Street.
R. J. DUNGLISON, M. D.,
636 North Eighteenth Street.

PUBLISHERS' NOTICE.

The unexpectedly large demand for the Journal having entirely exhausted the January number, we will pay for that number 50 cents each in cash, or as credit upon subscription. Our friends who do not care to preserve files of the Journal will confer a favor by promptly accepting our offer.

JOHN P. MORTON & CO., *Publishers.*

THE AMERICAN PRACTITIONER.

APRIL, 1872.

> Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.—RUSKIN.

Original Communications.

AMNESIC AND ATAXIC APHASIA.

WITH AGRAPHIA AND TEMPORARY RIGHT HEMIPLEGIA, THE RESULT OF EMBOLISM OF THE LEFT MIDDLE CEREBRAL ARTERY.

BY T. M. B. CROSS, M. D.,

Assistant to the Chair of Diseases of the Mind and Nervous System, Bellevue Medical College.

Captain D., thirty-two years of age, was born in England; is married and the father of two children, one of whom is at present living. A strong, robust man, of medium size, fine constitution, and sanguine temperament, he has always enjoyed the best of health, and has never suffered in his life from any disease of moment which he can at present recall; nor has he ever been afflicted with rheumatism, gout, or syphilis, so far as he is aware. In tracing his family-line down to the present time, there is no history of diseases of the nervous system among any of its members, either on the maternal or the paternal side, until we come to his brother, who is an epileptic, and then again to one of his children, who died in infancy of epileptiform convulsions. Even in regard to other affections, he can remember none to which he is hereditarily predisposed, as his father, his mother, his grandfather and grandmother on both sides, were long-lived and very healthy people.

About the 3d of July last he was suddenly seized with severe palpitation of the heart, his face and lips became very livid, and he had extreme vertigo; yet there was no aberration of speech; and if other symptoms were present they were not detected. He was confined to his bed from this attack for two weeks, after which he was able to be up and about attending to his daily avocations; and in the course of a few days his health seemed quite restored, and he felt as well as ever. He remained in this condition, however, only a short time; for on the 14th of August, as he was crossing over to New York City on the ferry-boat, he was paralyzed on the right side, and lost the power of speech. At the time of the attack he was standing on the deck, engaged in reading the newspaper and whistling a tune, when suddenly, and without the least warning, the lines became blurred, and his tune was cut short as though he had been shot. He fell instantly to the deck, and was unconscious for a few minutes; but he soon regained his senses, was carried home, and a physician was summoned, who on examination found that he was paralyzed on the right side of his body. The leg and arm were both involved, the face was drawn to the left side, and his speech was so much impaired that he was totally unable to utter a single audible sound. The condition of the pupils, of the muscles of the eyes, and of the tongue were not observed; neither was the tactile sensibility tested, nor the mental symptoms, if any were present, noted. He now had a vein opened in his arm, yet it was some time before the blood would flow; but after it commenced he was bled profusely, whereupon he immediately rallied, spoke a few words, and then walked up stairs without assistance. In the course of a week the paralysis of the face had entirely disappeared, and he had quite recovered the normal use of his arm and leg; but in regard to his speech he was not so fortunate, for he was only able to make use of three or four words—namely, "one," "two," and "yes, mam"—which he used indiscriminately in reply to all questions. From this period until the 14th of October last, when he came under the observation of Dr. Wm. A. Hammond and myself, at the New York State Hospital for Diseases of the Nervous System, he had improved very little in the acquisition of words, as will be seen from his condition at that time, which was as follows.

The dynamometer shows that there is the normal disparity between the right and the left hand, the patient being right-handed. There is no observable deviation of the face to the left side, even when its muscles are thrown into action through the influence of the emotions. The mobility of the leg is at present unimpaired; the toe of the right foot does not catch or drag in walking, and the patient appears to use it fully as well as the other. The tongue, however, does not come out perfectly straight, as there is a slight deviation toward the left side; nevertheless there is no restraint in its movements, for the patient can move it in all possible directions with the utmost ease. He can at present whistle very well, which shows that he has nearly regained the power of coördinating the muscles of the lips; for after the facial paralysis had disappeared, and the mouth was restored to its normal position, he was even then unable to perform the movements with the lips which are required to act in harmony in order to produce a musical sound, so as to whistle an air. The tactile sensibility and the sensation of pain are normal on the whole of the right side of the body. He has no headache or other head symptoms at present; all his special senses are normal; pupils are equal in size, and respond readily to light; has no ptosis, no strabismus, or other impairment of vision. The ophthalmoscope discloses that the vessels of the choroid and optic disk of the left eye are larger, more tortuous, and more numerous than those of the right, and the choroid of a redder hue. On examining the heart it was found to be enlarged, and the normal valvular sounds were much weakened. There was also a distinct intermission in the pulsations of the heart, which was also very irregular in its action. This intermission is not only perceptible in the precordial region, but also in the radial artery in each wrist. The most careful attention, however, failed to discover any murmur. The lungs were perfectly healthy. His bowels are regular, his urine natural, and his general health excellent. His appetite is good, he sleeps well, and if he could give expression to his thoughts it seems as though he would be pronounced a tolerably healthy man.

He was the subject of a clinical lecture, by Prof. Hammond, to the class of the Bellevue Hospital Medical College, and has regularly made his appearance in the lecture-room every Saturday, he appearing to take great interest in the remarks made on his case.

The vocabulary of this patient is at present restricted to a few such words as "one," "two," and "yes, mam," which expressions he makes use of in reply to nearly all questions, whether he intends to convey a negative or an affirmative answer; and between these he makes no choice, but uses either indiscriminately. He seems to comprehend perfectly everything that is said to him, yet it is a very difficult matter in a case like the present, where the patient is able to speak, to write, and to gesticulate only to a very limited extent, to form an accurate idea of his intellectual capacity. On asking him his name, he looked attentively at me and replied, "One two." "But that is not your name." He replied, "Yes, mam." "How old are you?" He smiled, closed all the fingers of both hands three times, and then held up two fingers. I answered, "Thirty-two." He said, "Yes, mam," nodded his head in approval, and then suddenly said, "That 's so." I asked him to repeat the expression he had just used, and he replied, "One two." "Say, one two." He answered, "Yes, mam."

"Can you count?" He replied, "Yes, mam." "Say, one." He answered correctly. "Say, two." He repeated the number. "Say, three." He paused, and then suddenly said, "Too much." This was about the extent of this man's vocabulary. I now tried to make him repeat a word after me, but all my efforts were in vain, if I except the numerals one and two. He can say "one two," but he can not say "two one." Although he is unable to give expression to his thoughts, he is nevertheless quite intelligent. He does a large and lucrative business, which he superintends in person, and his agent and wife assure me that they can see no change in his capability of managing his own affairs. He knows the use of all objects with which he was formerly familiar, although he can not call them by name. If he be asked the name of an object—as a book, for instance—he will make the sign of denial until the correct name is mentioned, and then he will smile approvingly and say, "Yes, mam." I have tried him very often in this manner, and he has always been correct, when the object was such as he ought to be familiar with. On asking him if he could read, he immediately signified to me that he could; then, running to my table, he took up a newspaper, and, apparently following the lines, repeated the most outlandish gibberish. His wife, who was present, told me he often read the papers, and that she was quite certain that he understood many of the subjects therein contained. As I rather doubted this, I very carefully tested his capacity in this respect; and I was not surprised to find that not only was he unable to read and to distinguish one word from another, but that he was equally unable to point out a single numeral or a single letter of the alphabet correctly. Again, as he persisted that he understood perfectly, I conversed on several subjects, and requested him to tell me which one he was reading. When I spoke of any theme of every-day conversation, he pointed to the article in the paper and exclaimed, "Yes, mam," "That 's it;" and he was always wrong. He can write only a few words, such as Brooklyn, Jersey City, and his own name, without a copy; and although he writes these names distinctly and legibly, yet he is totally unable to pronounce them, even if the words be plainly enunciated, each separately, for him. He can point out correctly only those words which he is able to write without a copy, and these are only two or three in number, as I have already mentioned. With a copy before him, however, he can write as well and as fluently as he ever could in his life. He is perfectly conversant with time, locality, and circumstance. He is not only expert in managing his extensive business and providing for all the wants of his family, but in handling money he is both proficient and correct. Although he can not point out a single numeral correctly, yet he can tell the time; and in taking his history he constantly pulled out his almanac and referred me to the dates, which his wife subsequently informed me were right. He is at times very irritable and excitable. His wrath is easily aroused, and all his emotions are more or less exalted. The repetition of the same word, and the characteristic sign of impatience after an unsuccessful attempt to pronounce a word, are not as well marked in this case as many others which have fallen under my observation; nevertheless they are present, and are at times quite conspicuous.

Often while conversing with this patient, when he found that he was unable to make me understand what he wished to communicate, would he rush to my table in an excited manner, seize a pencil, and strive to write the words which he could not express; but after much effort he would only succeed in writing his own name, Brooklyn, or Jersey City, as if these words were stereotyped in his mind; and then his countenance would show plainly the grief he felt at his utter failure, and he would walk back to his seat, exclaiming in a doleful tone, "Too much, too much."

Again, this patient seems to have no idea of gesticulation or pantomime; and excepting the employment of his fingers in expressing numbers, he uses them to a very limited extent, and only then when all other means of making his ideas intelligible have failed. In enumerating by means of his fingers I have never known him to make a mistake. All attempts, however, to make him repeat any letter of the alphabet have so far proved fruitless.

The ease with which laughter or crying is excited in Capt. D. is a prominent point in his case, as it is very seldom met with in aphasic patients. The words that he articulates are clear and distinct; there is no stammering or tendency to clip the words. If asked to repeat the numeral five, he will say, "one two," and hold up five fingers; which shows conclusively that he understands, and that there is no difficulty in the organ of hearing.

The treatment adopted in this case was the passage of the primary galvanic current through the head, one pole being placed on the right mastoid process and the other on the left; then changing the poles, by placing one on the nape of the neck and the other on the forehead. These applications were made every other day, and in addition the patient has taken a sixteenth of a grain of strychnine three times a day internally, together with five drops of the phosphorated oil in emulsion, with mucilage, thrice daily also.

After he had been under treatment about a month he seemed to improve, for he acquired several new words, which he employed when he was engaged in superintending his men at work. Suddenly he would exclaim, "Come on now," "That 's all," "How do you know?" "Yes, sir," and the like. The words are only made use of on special occasions, and he can not be made to repeat them, although he has just given utterance to them. On the 10th of November, while asleep in bed, he awoke suddenly, and immediately felt extreme vertigo to such a degree that he was obliged to lie down again, and at the same time violent convulsive movements took place in his right hand. There was no loss of consciousness during the attack, and no aberration of speech manifest after it. On examining him a few days afterward, the only change in his condition that I could discover was that he seemed much less intelligent than he did on former occasions. Since this attack I have learned from his wife that he very often suffers from dizzy spells, but that he has never lost consciousness. Yet these speedily pass away, and they leave behind them no sequelæ. The 17th of November last he commenced to have very severe headaches, which would come on at one o'clock in the afternoon and continue until five. After lasting a few days he informed me of the fact, and I discontinued the use of the strychnia. Since then the vertigo and the headaches have entirely disappeared.

Thanksgiving-day he was disappointed, because a lady whom he had invited was not present at dinner; and on the day after she called at his house to express her regrets, when he suddenly cried out, "Why did you not come to dinner?" This was enunciated as distinctly as you or I could have said it.

Gradually Captain D. is acquiring new words and phrases, but these he does not employ on common occasions; and he still adheres to "one two" and "yes, mam," for ordinary conversation. He has lately shown some knowledge of numbers, and on testing him in this respect I found he was able to add up as many as three columns of figures. He is also able to write many numerals, and his wife says he can calculate his profits very readily at present by writing them down on paper and adding them up. His figures are not always distinct, but they are some of them very well formed. By testing him on this point I found that his wife's assertion was correct. He has lately formed the habit of swearing very profanely, and he makes use of several well-known oaths with the utmost ease and facility. In this respect at least his powers of coordination are good. He is aware that he swears, and seems to take a certain degree of pleasure in so doing. He is also very fond of notoriety. He has had his picture printed on his circulars, which he takes great pride in distributing broadcast over the country, and to the medical class of the college. He has undoubtedly improved since he came under our observation in his mental processes; but so far as his speech is concerned he still seems to adhere with great pertinacity to "one two" and "yes, mam;" nevertheless the phrases which he utters from time to time show an increased activity on the part of the brain, and consequently we have every reason to hope for continued improvement. The following are the prominent points of interest in this case:

1. The disease came on suddenly, and from the history could be attributed to no other cause than embolism.

2. The paralysis was on the right side of the body, while the lesion was on the left side of the brain.

3. The aphasia was a concomitant of the right hemiplegia, which fact demonstrates almost to a certainty the site of the embolus in the left middle cerebral artery.

4. There is a forgetfulness of words, or an impairment of the idea of language, which is called amnesic aphasia. This form exists in this case, but is by no means so prominent as the other, as will be seen from the history. If there were no trouble in coördinating the muscles concerned in articulation, the patient would experience no difficulty in repeating the word after it had been distinctly pronounced for him, provided the interval of time between the word spoken and the attempt to enunciate it were not too long. On testing Captain D. in this respect I found him very deficient.

5. There is an impairment of the expression of language, or ataxic aphasia. This is the marked form in the present case. It depends upon an inability to will the movements necessary to produce articulate language.

6. There is agraphia, which is of the amnesic variety. In this case he does not remember written forms, but when a copy is before him he writes fluently.

7. While the ataxia of speech is the most conspicuous, the agraphia is limited almost entirely to the amnesic variety.

8. There is an impairment of gesture or pantomime, which is particularly marked in this case.

New York.

TWO CASES OF PUERPERAL CONVULSIONS.

BY H. K. PUSEY, M. D.

Puerperal convulsions are the gravest casualty to which the pregnant or puerperal female is subject; so great a proportion of deaths have not followed puerperal fever, placenta prævia, or any other sequel or complication of labor. Fortunately this disease is of rare occurrence. In the sixty-eight thousand four hundred and thirty-five cases of labor reported by Dr. Ramsbotham, there occurred sixty-seven cases of convulsions, less than one in one thousand cases; Mad. Boivin, in twenty thousand three hundred and fifty-seven cases of labor, had nineteen cases of convulsions; while Mad. Lachapelle reports sixty-one cases of convulsions in thirty-eight thousand cases of labor, a larger proportion than occurred to the observers above named, but not so great as is reported by many observers in this department of practice. The ratio of convulsions to pregnancy and labor, in the largest number of cases that I have been able to gather, stand as one to about seven hundred.

The pathology and treatment of this class of convulsions is not so fully understood and established as to render unnecessary further investigation, nor warrant reproach of a practitioner for adopting measures previously condemned by high authority, provided the measures he adopts are sustained by successful results.

This thought is suggested by the favorable result (to the mother) of two cases of forcible dilatation of the os uteri, version and delivery, after every means known to me had failed to arrest the convulsions, and death seemed to be inevitable. This procedure was not adopted without the knowledge that it was disapproved by very many high authorities, and only questionably admitted by Ramsbotham, whose three cases in which it was practiced proved fatal.

Although convulsions have occurred and continued after delivery, their subsidence has so generally followed that event as to render the emptying of the womb very desirable, if not, in fact, the absolute indication. Indeed nature points with so much constancy to this means of relief as to have enabled Dr. Ramsbotham, in the great range of his experience, to say that he "never knew a woman to die of puerperal convulsions with the child in her." This experience, however, has been controverted by other observers. Since the occurrence of these cases I have gathered from neighboring practitioners an account of four cases of puerperal convulsions in which the women died undelivered.

CASE I. Mrs. C., aged twenty-two years, plethoric habit, in first pregnancy, at full term, after suffering for eighteen hours with severe pain in the head and back of the neck, with giddiness, for which she had taken quinine and morphine, was seized with violent convulsions at five P. M., May 9, 1871. Dr. B. W. Payne was called, and treated the case during the night with chloroform, chloral, bromide of potassium, and opiates. The convulsions were repeated during the night at intervals not longer than thirty to forty-five minutes.

On the 10th, at six A. M., I first saw the patient. Dr. E. R. Montgomery had just arrived. I was informed she had had at least twenty convulsions, had not been conscious since the attack; pulse extremely feeble, and could not be counted; face purple and distorted, jaws closed, breathing slow and hissing; occasional contortions of the body, attributed to the presence of uterine pains, but there was no dilatation of the os uteri. Twenty ounces of blood were at once taken from the arm, with marked improvement in the breathing and appearance of the skin. Injected into the rectum thirty grains hydrate of chloral, sixty grains bromide of potassium, and three fourths of a grain of morphine, dissolved in two ounces of warm water. The patient became more calm, and rested nearly three hours, when she was again seized with a convulsion that lasted until respiration was so nearly suspended as to appall the friends with the thought that she was dead. As soon as respiration regained some force and frequency, the patient was placed in position for turning and delivery. The fundus of the uterus being firmly supported by the hands of an assistant, the index finger was insinuated into the os uteri, which was now found to be soft and dilatable. Soon, by moderate force, another and another finger was admitted, until the cone formed by the entire hand was wedged into the os. At this point resistance gave way so suddenly as to excite apprehension of laceration, and I stopped to feel for the lesion, but was rejoiced to find none. The hand then glided easily into the womb, the feet were brought down, and the child delivered alive. There was no recurrence of the convulsions. Consciousness returned in sixteen hours, and the patient had a good recovery. The child died in thirty-six hours.

CASE II. Mrs. L., aged twenty-one years, at full term of gestation; face and lower extremities œdematous; had spent a restless night, and had intense pain in the head. On rising from bed was attacked with a convulsion, at four o'clock A. M., on June 14, 1871. I saw her in an hour from the attack, and found her in the third convulsion. The purple hue of the skin did not disappear, nor consciousness return between the attacks. I at once bled her to thirty ounces, gave twenty grains of chloral and forty grains bromide of potassium by the mouth, and made cold applications to the head. In one hour the convulsion returned with great violence, and continued until respiration was almost suspended. I then gave chloroform, and maintained her partially under its influence for an hour and a half. Another convulsion occurred, unabated in violence. Repeated the chloral and bromide, with half a grain of morphine. Although there were no signs of uterine pains, I made an examination of the womb, and found the cervix obliterated and the os uteri soft, but undilated. The presence of the two fingers in the vagina seemed to increase the nervous disturbance and to hasten the recurrence of the convulsion, which came in twenty-five minutes. I maintained her as fully under the influence of chloroform as I thought the disturbed state of the respiration and circulation would allow, and gave the chloral, bromide, and morphine every hour and a half until she had taken four portions. The convulsions continuing to recur with unabated violence until one o'clock P. M., I became convinced that the means on which I was relying would not arrest the disease, and that unaided delivery was not going to occur in time to save the mother. I had her placed on the French pallet, and proceeded to make another examination of the womb; found the os but little changed, passed the finger into it with slight resistance. I soon succeeded in dilating sufficiently to admit a second and a third finger, when another convulsion came, during which I desisted and relaxed the presure. As soon as the convulsion passed off, the fundus of the uterus being well supported, I passed the hand into the womb, brought down the feet, and delivered a dead child.

The woman was then put to bed in a state of apparently hopeless exhaustion, but the respiration soon became stronger and the pulse perceptible at the wrist. In three hours she had another convulsion, but not so protracted nor violent as the previous. There was no further return of the convulsions. She remained unconscious during the night of the 14th, and during the day and night of the 15th. Several times I gave her the dose of chloral, bromide, and morphine, to allay nervous excitement and procure rest. On the evening of the 15th the bowels were freely moved with warm-water injections. Consciousness returned in forty-eight hours. She had a good recovery, without any knowledge of the ordeal through which she had passed, except that which she obtained from those who attended her.

Garnettsville, Ky.

WILL QUININE ORIGINATE CONTRACTIONS IN THE GRAVID UTERUS

SUFFICIENT TO PRODUCE ABORTION OR PREMATURE LABOR?

BY JAMES C. HARRIS, M. D.

Read before the Elmore County Medical and Surgical Society, February, 1872.

From a brief review of our periodical medical literature, it appears that for the last twelve or fifteen years some of our professional brethren have entertained the opinion that quinine given to pregnant females frequently produced abortion. As long ago as 1860 Dr. John Lewis, of Indiana, published a paper actually advising its use in ten-grain doses as a *partus accelerator* in tedious labor; while on the other hand it also appears that there are others, whose opportunities appear to have been equally good, who declare they have been giving it for years in all the different stages of pregnancy without any perceptible bad results. From the number and character of the notices that have recently appeared in some of our medical journals, it is clear that the inquiry, whether this remedy in ordinary doses will under any circumstances originate contractions in the gravid uterus, still remains unanswered, and that the subject is rapidly increasing in importance and interest. Under this view of the subject I have concluded, at the solicitation of several members, to communicate to the society some circumstances and facts that in my opinion directly tend to the solution of this apparently vexed question.

During the year 1839 I resided in Cedar Bluff, the then county-seat of Cherokee County, Ala., a region of country from which the Cherokee Indians, under a treaty with the United States, had been but recently removed to their new homes west of the Mississippi River; and which was then, and had been for some time previously, rapidly settling up. During the fall intermittent fever prevailed to a considerable extent throughout almost the entire county, but more particularly in Cedar Bluff and its immediate neighborhood. In some of these cases, either from the severity or frequent recurrence of the chills, or both, the pain and aching in the lumbar and pelvic regions were so severe in several pregnant ladies as to produce abortion or premature labor. As cinchona or any of its salts could not at the time be procured in sufficient quantities at any price, I am certain that during this fall and the early part of the winter I attended as many as four cases of premature labor, the result alone of the above-mentioned causes, and heard of the occurrence of at least as many more well-authenticated similar cases in the hands of others. In two of the cases attended by me the children were born during the chill. Late in the fall, still having several ladies under my care suffering from chronic chills and fever, who were pregnant, and threatened at the recurrence of nearly every chill, from the lumbar and pelvic pains, with premature labor, I sent a messenger to Huntsville and purchased two or three ounces of quinine, with which, as soon as it arrived, properly conjoined with calomel or blue mass or morphine, as each particular case appeared to require, I went to work, and soon had the satisfaction to learn that their nausea, vomiting, lumbar and pelvic pains were relieved, and their chills and fever cured. Never since this time have

I believed that quinine, as ordinarily administered, possessed any properties that were in the least calculated to produce contractions in the gravid uterus; but on the contrary, under certain circumstances, have always relied upon it as the very best remedy we know anything of to destroy the cause and break up the concatenation of symptoms upon which, among us, abortion frequently depends. The following case is in point:

Mrs. C. K., of this city, at the end of the fourth month of pregnancy, having miscarried in a previous pregnancy near the end of the fifth month, contracted chills and fever, which after the first two or three regular paroxysms continued to recur through the fall at rather irregular intervals. With the exception perhaps of two doses of calomel, taken at an interval of about one month between each dose, quinine, in suitable doses, was relied upon to break up and cure her chills and fever. About ten o'clock on the night of the 23d of December, 1871, and near the end of the eighth month of her pregnancy, I was called to see her, having in the morning had a very bad chill, followed through the day with such severe lumbar and pelvic pains as to cause her to believe that she was really in labor. On examination, finding the os uteri but little if any dilated, and believing from the mixed character of the pains that she would probably pass safely through the night, I left, with directions if her pains increased to send for me immediately. At my visit next morning I found her free of fever and comparatively easy, with the exception, as she expressed it, of a "broken back." Learning on this visit that it was probably six weeks before she expected to be confined, and also that the time for the regular return of her next chill would be about daylight the next morning, I prescribed fifteen grains of quinine, with one third of a grain of morphine, in five powders; one to be given every four hours in a little hot coffee, and continued until all were taken. The next morning she missed her chill. Through the evening and night of the

26th she took without the morphine, in four doses, twelve grains of quinine, and again missed her chill; and has been ever since most of the time up, and able to attend to her ordinary household affairs.

In conclusion, I must confess that on first seeing quinine, after my experience with the remedy, recommended as possessing abortive or parturient properties, I was not a little surprised; and I am still puzzled to understand how any physician, with any experience whatever in the treatment of the diseases of females, could arrive at such a conclusion.

WETUMPKA, ALA.

ON THE ART OF PRESCRIBING.

BY JOHN O'REILLY, M. D.

AN INTRODUCTORY LECTURE.

GENTLEMEN,—I propose this evening to occupy your attention with the art of prescribing in general, but especially in the diseases of infants. I make special reference to this class of sufferers because I think their maladies do not receive from the profession the attention due them, too many dismissing infantile diseases with the remark "that, as a class, we can do little for them any way." To my mind, on the contrary, they offer the most promising field for the practitioner, and many schools of medicine have lately awarded to the subject a distinct lectureship, recognizing the fact that the treatment of infants requires almost a new semeiology, pathology, and therapeutics. But why, you will ask, do they deserve, as a class, such special attention? If a statistician, examining the records of crime and its causes, finds that in large cities the predisposing as well as the exciting circumstances of viciousness are combined, he would infer that there was the field for the reformer; or if an engineer were seeking a new field for his labors, where he might add to his reputation and increase his knowledge and usefulness, he would go to a country where there are mountain ranges, large rivers, and immense mineral resources. There, his judgment would tell him, they must bridge streams, scale mountains, and build railroads—where nature offers her greatest obstacles to science being the point that demands skilled mechanism. The same reasons that send the reformer to cities, and the engineer to points where nature builds her barricades to science, should direct the mind of the physician to the study of infantile medication; for it is infants, as a class, that he will be called oftenest to treat. The examination of medical records shows that it is among them that disease comes oftenest, soonest, and with the greatest intensity, that it is among them that death makes the greatest havoc. But, besides its importance, it is, I think, the most interesting in the whole scope of medicine. It is the study of human nature in its simplest, purest form. No malingering, no hysterics, no feigned diseases do we meet in the infant. Its motions, its sighs, every variation of its features have a significant meaning, and to interpret them is one of your chief concerns. You must learn to think, to feel, and even to talk for your little patient. Its smiles, its cooings, its prattlings must be as intelligible to you as the alphabet, for they constitute a language in which you must find a definition for its diseases. This study is really a medical pantomime, for all information is communicated by gestures and exclamations.

There are two points in the general medication of children to which I wish especially to call your attention. One is the subject of thirst, the other is the intervals at which medicine should be given.

In quite a number of infantile diseases the stomach is very capricious, and to keep it quiet is one of our greatest troubles. This difficulty is often caused by the attendant not understanding the difference between hunger and thirst. The sick child is fretful, and cries and pulls at its mother's breast; and she, willing to do anything that soothes it, permits it to nurse. It sucks, and in a few moments rejects the milk; but cries again, and the mother again yields it the breast only to have the stomach again reject its contents, and thus the fight goes on until the infant is exhausted. The doctor gives medicine to quiet the irritable stomach, and the mother counteracts its effect by overfeeding. What I wish to express is the fact that the child is not hungry; it does not want the breast; but is thirsty and wants drink. In health the breast is food and drink, but in disease the craving is that of thirst, not of hunger, and the stomach which rejects the milk because it is unable to digest it would be calmed by a cool beverage. In other words, were water given to the child in place of the breast, the stomach would be relieved, and in many cases the child saved. This difference between thirst and hunger in the infant is a point well worth noting.

Medicine should be given to infants in small but often-repeated doses. The interval should be only half as long as that for the adult. The reason for this is that the digestive organs of the infant act much more rapidly than those of the adult, and a medicine to have its effect kept up must be supplied in accordance with its entrance into and disappearance from the system.

Comparing the works on medicine of the present day with those of the last generation, no one can deny that the art of prescribing at this time is on a better footing than it was fifty years ago. But if medicine has improved in every direction, it does not follow that the practice of our forefathers was inefficient or hurtful. No doubt in former times some patients were bled too much, some even were bled who would have been better without it; but, on the other hand, who will deny that to-day many are physicked too much, and that many take medicine who would get along without it? I will venture the statement that our predecessors did no more harm with antimony than we are doing by our abuse of alcohol. In short, we find in practice that a remedy falls into bad repute from abuse; from the character of the hands that use it, and not the character of the remedy itself. If formerly the physician felt lost unless his thumb was on his lancet, are there not many at the present who can see how to diagnose a disease only through the speculum, and who have done away with the hobby of hepatic congestion merely to substitute that of uterine irritation?

For general purposes, remedies may be divided into two classes: 1. Those which are actively medicinal; 2. Placebos. By active remedies I mean those that are used for their effect; by placebos I mean those that are used because they produce no effect. Many diseases need active and energetic measures, when we use the first class; but you will often be called to infants whose complaints exist only in the imaginations of their mothers, or else are such as you can not diagnose. In all such cases as these we use the latter class. Of the active remedies I will now make special mention of but one, and that is opium. Of all the articles in the pharmacopœia this seems to act most strangely on the infantile organization, and unless you use it with the greatest discretion you will rue it. In fact, so uncertain is its action that I avoid it as a rule. True, it is a common remedy with mothers and nurses, but it is also true that when used by such no one records the bad effects. I have seen one grain of Dover's powder completely narcotize an infant when it was scarcely expected to quiet it. I have seen the twelfth of a grain of opium do the same thing, and a professor of obstetrics in this city once informed me that he was confident he had witnessed a death from that dose. I know this is a common dose with physicians; but since no one can foresee when it may act with such power, we should be cautious in all cases. I would advise you always to administer it in substance, a grain divided into twelve parts.

In this way you will be more apt to get the exact proportion in each dose. The best druggist, when mixing it with other articles, may get more in one powder than another. All liquid preparations are of uncertain strength.

The second class of remedies is a favorite one in general practice as well as in the treatment of infants. Placebos in the cure of disease are what manners are in acquiring business; and as I have known several physicians to make a lucrative practice by the suavity of their manners, I have known others make reputation by prescribing at the right time remedies of this class, letting nature rally after the patient had been medicated almost to death by persistent medicine-giving doctors.

After all, the science of prescribing for adults as well as infants, but especially the latter, consists largely in knowing when not to give medicine. Be always on your guard, and never dose a child when it can get along without it. A dose or two sometimes may not affect the adult injuriously, but every grain too much is detrimental to the infant.

Another rule to be observed is "to let well enough alone." Do not unnecessarily change your prescription at every visit. Remember the saying of Lord Bacon, that a multiplicity of remedies for the same disease is a mark of ignorance. Never change your prescription as long as your patient is improving under it, nor strive to force nature to do better by trying something else. Never give a dose of medicine without considering well its action, nor give anything unless you wish to accomplish a certain definite effect by it. Do not acquire the habit fallen into by so many of giving drugs at random. For instance, when you learn that opium, tannin, lead, etc., are astringents, and sometimes beneficial in diarrhea, do not, when you are called to a child with this complaint, give the first of the above articles that chances to enter your mind, from the simple fact that you have seen it recommended. Consider well the condition of the particular case before you, and its causes, and then select that remedy which is especially indicated, and you will frequently find that the best astringent in diarrhea is an aperient.

In prescribing be not always on the lookout for something new. Seek not to be fashionable prescribers, by which I mean prescribing the latest remedies. Avoid likewise a routine practice; that is, having set prescriptions for every disease. Do not conclude that because a certain medicine appears to do well in a few cases you may throw it into the stomach of every patient who presents anything like the same assemblage of symptoms. Remember that the same disease in different constitutions requires different medication. And above all steer clear of the great error of treating diseases by their names; of diagnosing a disease and then treating it by its title. Let your views of treatment always be based upon general principles. Take physiology and pathology for your groundwork, and predicate your special medication on the symptoms most prominent.

LOUISVILLE.

ELIXIRS AND WINES.

READ BEFORE THE LOUISVILLE COLLEGE OF PHARMACY, JANUARY 16, 1872.

BY C. LEWIS DIEHL.

At the request of the committee on unofficinal formula, I present in the following the formulas used by me for preparing some of the elixirs and wines prescribed by the physicians of Louisville. Many of these have been used by me for several years, as the elixirs of calisaya, etc., and have been found to be good preparations. Others have only lately been prepared by me, but seem to be desirable preparations, if this class of preparations is at all desirable or necessary. It is not my intention or desire to criticise the propriety of introducing these preparations; but that a necessity exists for formulas which will secure uniformity in their preparation seems to me beyond question. Our markets are flooded with numberless preparations of this kind. Physicians prescribe them, and usually signify the manufacturer whose particular preparation they prefer. As a result of this we are either compelled to keep all of these preparations in stock, or to depend upon the courtesy of our fellow-pharmaceutists when they are prescribed. If we attempt to keep them in stock a considerable outlay of capital is required, with in but isolated instances more than a very meager chance for a fair return. To depend upon our neighbor for the occasional calls is unfair to him, as it in a measure compels him to carry the stock upon which we may reap profit. But in every way it is unfair to the patient, who is often caused to pay exorbitant prices—even when such price is only a fair advance upon the cost—for preparations that if prepared by the pharmaceutist would not exceed the cost of ordinary tinctures.

I have attempted to simplify formulas as much as possible, in order that such as are but seldom demanded may be prepared as wanted. With this in view I prepared a *simple elixir*, an *elixir of calisaya bark*, a *wine flavored with orange*, various *solutions of essential oils* in alcohol, and *cochineal coloring;* all of which I usually keep in stock, and prepare by their aid such preparations as may happen to be in demand.

Elixir of Calisaya Bark.—The formula for this elixir I have already published in the Am. Jour. of Pharm., Vol. XL.; but I venture to repeat it, with such modifications in the technical directions as may have occurred to me during my manipulations since then.

Take of Calisaya bark, ...	℥ xxiv;
Curacoa orange-peel (ribbons),	℥ xvi;
Coriander, ...	℥ iv;
Cardamom, ...	℥ iss;
Cinnamon (Ceylon), ...	℥ iij;
Anise, ...	℥ j;
Cocoa (Baker's), ...	℥ viij.

Reduce to a moderately fine powder; displace with a mixture consisting of 1 part by measure of stronger alcohol and 3 parts of water; obtain two and a half gallons of percolate.

Meanwhile prepare from six pints of solution of tersulph. of iron hydrated sesquioxide of iron by the formula of the pharmacopœia, measure it, and add to every four measures one measure of alcohol; then add of this sufficient to the percolate obtained as above to deprive it of its cincho-tannic acid. The absence of the latter is readily ascertained by the addition of a drop of muriated tincture of iron to a filtered portion of the liquid in operation, which should not be colored by such addition. Should coloration result, the intensity or faintness will serve as a guide to the further quantity of hydrated sesquioxide of iron necessary to completely detannate the preparation. As soon as this result is obtained, strain the mixture upon a muslin strainer; and when the liquid ceases to pass, wash the residue upon the strainer with sufficient of a mixture of one measure of stronger alcohol to three of water, to make the strained liquid measure five gallons. Now triturate together oil of orange (fresh), f. ℥ss (or solution, f. ℥v; see further on); carbonate of magnesia, ℥vj. When thoroughly mixed incorporate it with the strained liquid obtained as above, agitate well, and filter through paper; express the filter between muslin, filter the expressed liquid, and mix with the previous filtrate, in which dissolve 15 ℔ av. of sugar. If necessary, filter the elixir thus obtained; but simple straining will usually answer.

Simple Elixir.—Take

Oil of orange (fresh),	f. ʒ j	(or solution,	f. ʒ x);
Oil of cinnamon, .	*m* x	"	*m* c;
Oil of anise, . . .	*m* iv	"	*m* xl;
Oil of bitter almonds,	*m* ij	"	*m* xx;
Tinct. of cardamom,	f. ʒ x;		
Stronger alcohol, .	℈ ij.		

Dissolve the oils in the alcohol, add the tincture, and triturate the solution with a previously-powdered mixture of cocoa (Baker's), ℥j; carb. magnesia, ℥ij. Then add gradually four and a half pints of water, transfer the mixture to a one-gallon bottle, agitate occasionally for several hours, and filter; express the filter between muslin, filter the expressed liquid, mix with the previous filtrate, and dissolve in it 3 ℔. av. of sugar; filter or strain, as may be necessary.

The simple elixir thus prepared has the color of dark Madeira wine, and an exceedingly pleasant taste. It serves as a vehicle for many medicines, disguising them to a great extent and rendering them generally more palatable.

Wine of Orange.—Take Oil of orange (fresh), *m* v (or solution, *m* l);
Alcohol, ... f. ℥ ss;
Carb. magnes., . . ℥ ss.

Triturate together, and add syrup, f. ℥ ij; sherry wine, f. ℥ xiij ss; mix thoroughly, and filter.

The wine obtained in this way has an agreeable flavor of orange. The use of carbonate of magnesia renders it neutral, and thus enables the introduction of medicinal compounds that are liable to decomposition in the presence of acids.

Solution of Essential Oils.—I have been in the habit of dissolving essential oils that are liable to change in alcohol, and have found these solutions very convenient for measuring minute quantities of oils. They are prepared by dissolving essential oil, 1 part (by measure), in alcohol fort., 9 parts; which strength is invariably meant when, in the formulas, I direct the use of solutions of essential oils.

Cochineal Color.—Take of Cochineal, . . . ℥ j;
Carb. potassa, . . ℥ ss;
Powd. alum, . . . ℥ ss;
Cream of tartar, . ℥ j;
Water, ... ℥ viij.

Reduce the cochineal to a fine powder, add the carbonate of potassa, and triturate with three ounces of the water. Allow the mixture to stand one hour, add the alum and cream of tartar successively, and when effervescence has ceased the remaining water; filter. This solution imparts to the elixirs a fine red color; but is in some respects unsatisfactory, as it soon spoils.

The above are all the preparations that need to be kept in stock; and with them, and such other ingredients as are readily obtained by purchase, almost all the elixirs and wines now prescribed may be prepared extemporaneously. The exceptions to these are:

Compound Elixir of Taraxacum, which, being used for the purpose of disguising the extreme bitterness of quinia, should be prepared according to the original formula of Mr. Candidus, as communicated by him to the American Pharmaceutical Association.

Elixir of Pyrophosphate of Iron, Quinia, and Strychnia requires particular manipulation, which precludes the use of simple elixir. The following formula—the result of concert of experiments of my friend, Mr. E. Scheffer, and myself—has been used by me since autumn, 1869, and I can recommend it as uniformly successful when the manipulation is carefully conducted:

Take Sulphate of quinia,	60 gr.;
Strychnia,	1 gr.;
Citric acid,	5 gr.;
Stronger alcohol,	f. ℥ iij;
Solution of oil of orange,	*m* l;
Syrup,	f. ℥ vi;
Pyrophosphate of iron,	℥ ss;
Distilled water,	f. ℥ vij;
Aqua ammonia,	q. s.

Triturate the sulphate of quinia, strychnia, and citric acid together until minutely divided, then add the alcohol and solution of oil of orange; warm the syrup slightly (to about 150° F.), and add to the turbid alcoholic mixture, when upon stirring the mixture becomes clear. To this add the pyrophosphate of iron previously dissolved in the distilled water, and finally aqua ammonia carefully (drop by drop), until the elixir is perfectly neutral to test paper; filter. The finished preparation has a greenish yellow color, a pleasant flavor of orange, and is permanent.

Elixir of Calisaya Bark with Iron.—Take of pyrophosphate of iron 128 grains, soften in two ounces of water, and stir in gradually one pint of elixir of calisaya bark; filter.

Elixir of Calisaya Bark with Iron and Strychnia.—Dissolve one grain each of strychnia and of citric acid in two ounces of water: add one pint of elixir of calisaya bark with iron; mix and filter.

Elixir of Calisaya Bark with Iron and Bismuth.—Dissolve 128 grains of pyrophosphate of iron and 128 grains of ammonio-citrate of bismuth in two ounces of distilled water, add fourteen ounces of elixir of calisaya bark; mix and filter.

Elixir of Calisaya Bark with Iron, Bismuth, and Strychnia.—Dissolve one grain of sulphate of strychnia in two ounces of water, add one pint of elixir of calisaya bark with iron and bismuth; mix and filter.

Elixir of Calisaya Bark with Iron and Beef.—Dissolve one half ounce of extract of beef (prepared by Liebig's method) in one pint of elixir of calisaya bark with iron; allow it to stand several days, if possible; and filter.

Elixir of Pyrophosphate of Iron.—Soften 256 grains of pyrophosphate of iron in one half ounce of water, add fifteen and a half ounces of simple elixir; mix and filter.

Elixir of Bismuth.—Dissolve 256 grains of ammonio-citrate of bismuth in four ounces of distilled water; mix with twelve ounces of simple elixir, and filter.

Elixir of Valerianate of Ammonia.—Dissolve 256 grains of valerianate of ammonia in two ounces of simple elixir, carefully add aqua ammonia until the solution is exactly neutralized; then mix with fourteen ounces of simple elixir, filter, and color with cochineal color to a bright red.

Elixir of Valerianate of Ammonia and Quinia.—Triturate sixty-four grains of valerianate of quinia until minutely divided, then dissolve in it one pint of elixir of valerianate of ammonia, and filter.

Elixir of Valerianate of Ammonia, Quinia, and Strychnia.—Dissolve two grains of strychnia in two ounces of water by the aid of just sufficient valerianic acid; mix with one pint of elixir of valerianate of ammonia and quinia, and filter.

Elixir of Valerianate of Quinia.—Triturate 128 grains of the valerianate of quinia until minutely divided; mix with one pint of simple elixir; carefully add valerianic acid until the liquid becomes clear, shaking after each addition, and filter.

Elixir of Valerianate of Quinia and Strychnia.—Dissolve two grains of strychnia, minutely divided, in two ounces of water by the aid of just sufficient valerianic acid; mix with one pint of elixir of valerianate of quinia, and filter.

Elixir of Valerianate of Strychnia.—Dissolve three grains of strychnia in two ounces of water by the aid of just sufficient valerianic acid; mix with one pint of simple elixir, and filter.

Elixir of Bromide of Potassium.—Dissolve one ounce of bromide of potassium and one ounce of sugar in one pint of simple elixir; add twenty minims of solution of oil of orange and ten minims of solution of oil of bitter almonds, and filter; color with cochineal color.

Elixir of Bromide of Sodium.—Prepare this like elixir of bromide of potassium, substituting bromide of sodium for bromide of potassium, and omitting the color.

Elixir of Bromide of Ammonium.—Prepare this like elixir of bromide of potassium, substituting bromide of ammonium for bromide of potassium, and omitting the color.

Elixir of Hops.—Add two and a half ounces of fluid extract of hops (prepared according to U. S. formula for f. e. gentian) to thirteen and a half ounces of simple elixir; mix and filter.

Elixir of Lupulin.—Triturate two ounces of fluid extract of lupulin with two ounces of carbonate of magnesia; add fourteen ounces of simple elixir, transfer to a bottle, agitate occasionally for several hours, and filter.

Elixir of Gentian and Pyrophosphate of Iron.—Triturate 100 minims of solution of oil of orange with two ounces of sugar; dissolve it in eight ounces of elixir of pyrophosphate of iron and six ounces of simple elixir; add one half ounce of alcohol and one half ounce of fluid extract of gentian; mix and filter.

*Elixir of Chloral Hydrate.**—Dissolve two ounces of chloral hydrate in one pint of simple elixir, and filter.

Wine of Iron.—Dissolve 128 grains of ammonio-citrate of iron in two ounces of water; add one pint of wine of orange; mix and filter.

Bitter Wine of Iron.—Dissolve 128 grains of soluble citrate of iron and quinia in two ounces of water; add one pint of wine of orange; mix and filter.

Wine of Wild-cherry Bark.—Mix one ounce of fluid extract of wild-cherry bark, two ounces of syrup of wild-cherry bark, ten minims of solution of oil of bitter almonds, and thirteen ounces of wine of orange. Allow to stand several days, and filter.

Wine of Wild-cherry Bark and Pyrophosphate of Iron.—Soften 128 grains of pyrophosphate of iron in two drachms of water; add one pint of wine of wild-cherry bark; mix and filter.

Wine of Beef.—Dissolve half an ounce of extract of beef (prepared according to Liebig's method) in one pint of wine of orange, and filter.

Wine of Beef and Iron.—Dissolve half an ounce of extract of beef (Liebig's method) in one pint of wine of iron, and filter.

LOUISVILLE.

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*This elixir was first prepared by me at the request of a gentleman who habitually used the chloral hydrate, and he finds that the chloral dissolved in this way retains its virtues most completely during the period required for the consumption of one quart. For this reason I have given the formula for its preparation, thinking that if such a preparation is desirable this seems to serve the purpose.

Reviews.

The Eye in Health and Disease: Being a series of articles on the Anatomy and Physiology of the Human Eye, and Surgical and Medical Treatment. By B. Joy Jeffries, A. M., M. D. Boston: Alexander Moore. 1871.

We read Dr. Jeffries's papers as they appeared in that sterling magazine Good Health, for which it seems they were originally written, with both pleasure and profit. We are not of those who think it not well to popularize medical knowledge. No layman can read Dr. Jeffries's work without learning a great deal that is both new and useful to him, and few physicians can go through it without being instructed. The book is handsomely printed on tinted paper, and is conveniently illustrated. It deserves to have as large a circle of readers in its present form as the papers from which it was prepared had when they gave interest to the columns of Good Health.

The Anatomical Remembrancer, or Complete Pocket Anatomist, etc. Third edition, with corrections and additions, by C. H. Isaacs, M. D., Demonstrator of Anatomy in the University of New York. New York: Wm. Wood & Co.

This little book, as we learn from a preface, is of English origin, though its title-page would lead us to infer otherwise. We object to this. Let us take the products of the foreigner if we will, but at least give him credit for his labor, however small that may be. We have objections also to the book itself. Anatomy is too important a subject to be trusted to "Remembrancers." Such books stuff men for the "green-room" with a knowledge that fades the day after it has been so used. They offer a great temptation to students, and ought not to be encouraged. We hope the time is near at hand when examining boards throughout this country will test the student's acquaintance with anatomy by examinations on actual dissections, as is done in England. This plan has the double merit of excluding "parrots" and of being much easier for those who have been really at work with their scalpels. R. O. C.

Works of Sir James Y. Simpson. Vol. II. *Anæsthesia, Hospitalism, etc.* New York: D. Appleton & Co. 1872.

The greater part of this volume will be found in Simpson's Obstetric Memoirs and Contributions, second series, edited by Drs. Priestley and Storer, and published in 1856.

Sir James was a man of wonderful learning, industry, and dialectic skill. These characteristics are prominent in this volume. His life illustrates the truth that friendless poverty and the absence of social position are not an insuperable barrier to the attainment of the highest fame in the medical profession. His life illustrates too the truth, forgotten by too many physicians, that the arduous labors incident to a large practice need not prevent constant professional growth, and contributions to the growth of medicine itself.

This volume is exceedingly valuable, both in an historical, scientific, and practical point of view, in that which relates to the subject first discussed; viz., *Anæsthesia*. *Hospitalism*, the second subject of consideration, is nearly, if not quite, made up of articles which were written and published in the Lancet a few months before Sir James's death. The third contribution is *Hermaphroditism*, and it probably is the most complete and ablest monograph upon this subject to be found in the English language. The final paper is entitled *Proposal to stamp out Small-pox and other contagious Diseases.* Messrs. Appleton & Co. are the publishers. Of course the *manner* of publication is well worthy the *matter.* T. P.

The Functions and Disorders of the Reproductive Organs in Childhood, Youth, Adult Age, and Advanced Life, considered in their Physiological, Social, and Moral Relations. By WILLIAM ACTON, M. R. C. S., Fellow of the Royal Medical and Chirurgical Society, etc. Third American from the fifth London edition; 8vo, pp. 348. Philadelphia: Lindsay & Blakiston. 1871.

The practical worth of the labors of this most conscientious and painstaking author is better attested by the number of editions of his work that have been called for than by anything we could say.

A Practical Treatise on the Diseases of Women. By T. GAILLARD THOMAS, M. D., Professor of Obstetrics and Diseases of Women and Children in the College of Physicians and Surgeons, New York, etc. Third edition, enlarged and thoroughly revised. Philadelphia: Henry C. Lea. 1872.

Our high appreciation of the previous editions of this work has been expressed in no equivocal terms. But better than any individual's commendation is the judgment of the profession, uttering itself in a demand for this third edition within four years from the issuing of the first. The book has been thoroughly revised, much new matter and many new illustrations have been added, and it better represents the present condition of gynecology than any work in the English language of which we know.

Want of space forbids our entering into details; nor is it necessary, for all our readers who are not already supplied with a copy of one of the previous editions will be sure to get this; that is, if at all interested in the treatment of diseases of women.

We venture to suggest that its talented author might complete the glory of his literary life, increase both his just fame and his usefulness, by writing a concise treatise on obstetrics.

T. P.

On Diseases of the Spine and of the Nerves. By CHARLES BLAND RADCLIFFE, M. D., F. R. C. P., Physician to the Westminster Hospital, etc.; JOHN NETTEN RADCLIFFE, Medical Superintendent of the National Hospital for the Paralyzed and Epileptic; J. WARBURTON BEGBIE, M. D., F. R. C. P., Physician to the Royal Infirmary of Edinburgh; FRANCIS EDMUND ANSTIE, M. D., F. R. C. P., Senior Assistant Physician to Westminster Hospital, etc.; and JOHN RUSSELL REYNOLDS, M. D., F. R. S., F. R. C. P., Professor of the Principles and Practice of Medicine in University College, London, etc. Philadelphia: Henry C. Lea. 1871.

This volume of two hundred pages consists of a series of essays which appeared in Reynolds's System of Medicine. As stated in the publisher's note, the papers are written by gentlemen of acknowledged ability and experience, who have paid particular attention to the several diseases on which they have written. The essay on Neuralgia, by Dr. Anstie, has since been embodied in a separate work, which we hope to notice at some length at an early day.

Clinic of the Month.

NITRATE OF SILVER IN TESTITIS AND CARBUNCLE.—Mr. George Cowell, F. R. C. S., after referring (Practitioner) to the favorable results of the use of the solution of nitrate of silver, as recommended by Mr. John Higginbottom (twenty grains to one drachm of water), in erysipelatous and erythematous inflammations, states that the application of the solid nitrate has for many years past been uniformly successful in his hands in testitis and anthrax. He uses it as follows: The scrotum is held in such a way that the portion of it which surrounds the swollen testicle is rendered, if not already so, sufficiently tense to present a tolerably smooth surface of skin. This is first wetted by means of a sponge, or better by a piece of lint, previously dipped in water, and the solid nitrate of silver is then carefully and equally applied over the whole testicle. A suspensory bandage and rest are of course prescribed, and such general treatment as may be required. Pain disappears in from two to six hours, and this is accompanied and followed by a gradual diminution of the swelling, the reduction being generally about one third during the first three days. Considerable smarting occurs for a short time after the application, and sometimes there is some vesication. The further treatment of the case becomes exceedingly simple. During the last five years he has treated in this way a large number of cases, and only twice has the application failed to reduce both pain and swelling. In both of these the appearance of the skin of the scrotum showed that the remedy had been but partially applied, and in both the symptoms were rapidly removed by a second and more careful application of the caustic. The rapid effect of this treatment is still more marked in cases of double testitis. The whole skin and dartos of the scrotum contracts firmly around the testes, speedily relieving the engorgement of the capillaries, and seeming to produce a gentle uniform pressure on the swollen organs. He has never known abscess to occur in any case treated with nitrate of silver.

In both the forms of anthrax, carbuncle, and boil the application of the solid nitrate of silver affords the most speedy means of cure. One looks back with feelings almost akin to horror at the heroic plan of treating carbuncles, sometimes enormous in their size, by crucial incisions. Cases too occur to one's memory in which, in spite of this operative procedure, the carbuncle still went on increasing in size; where, in fact, the incisions not only did no good, but positively did harm, by the shock to the patient and the increased risk of pyæmia. He has found that the duration of carbuncle is very materially diminished, and its extension cut short, by preceding the treatment recommended by Sir James Paget (which consists of emplastrum plumbi, resin cerate, poultices, and carbolic-acid lotion), by the application of nitrate of silver freely over its surface, repeated, if necessary, once or twice after intervals of two days. Immediately after the application a small soft pad of dry lint is applied, and retained by means of a piece of strapping and a bandage. The after-treatment is the same as Sir James Paget recommends, except that the poultice will be unnecessary, and the internal administration of iron or other tonic will generally be found useful. Boils are treated in the same way, and will seldom require a second application of the caustic. The *modus operandi* of the application of nitrate of silver in these cases seems to be the energetic stimulation and consequent contraction of the capillaries and small arteries of the part, whereby engorgement is diminished, the vessels are placed in a condition for returning to a healthy function, and morbid exudation is diminished, arrested, and removed.

He concludes his paper with the following case: A woman attended at the out-patient room at the Westminster Hospital with a large, hard, and painful carbunculous boil occupying the whole of the lower lip. The lip projected from the teeth to the extent of upward of two inches, and the increased saliva secretion ran from the mouth, as of course the lip was useless to retain it. There was a small point of ulceration almost in the center of the inner side of the lip, that side now facing upward. The solution of nitrate of silver was freely applied, and repeated once three days later, both times followed by rapid diminution in the size of the swelling, and the case made an uninterrupted recovery.

Treatment of Small-pox.—Dr. Wm. Stokes, of Dublin, in a short paper on this subject in the Dublin Journal of Medical Science, emphasizes the fact that the activity of pustulation is directly as the inflammatory state of the surface; and that in estimating the probability of pitting we must take largely into account the character of the disease. He then declares that in all cases, whether of the sthenic or asthenic form, the local treatment of poulticing is superior to any other; and adds that as a routine practice the application of light poultices over the entire face, or of a mask of lint steeped in glycerine and water and covered with a corresponding mask of oil-silk, has with but one exception effectually prevented pitting. In that case the patient was delirious, and could not be prevented from tearing the poultices off his face. He believes that if from an early period we protect the surface from the air, and keep it in a permanently moist condition, marking will seldom occur. Experience entitles us to hold that, other things being equal, the tendency to pitting—or, in other words, the virulence of the pustulation—is directly as cutaneous vascularity and heat. This method fulfills three important indications of treatment: 1. The exclusion of air; 2. The keeping of the parts in a permanently moist state, so as to prevent the hardening of the scabs; 3. The lessening of the local irritation. The value of the treatment is best seen in the inflammatory or sthenic type of the disease, although in the asthenic or typhoid form the occurrence of marking may be observed, particularly in the confluent cases.

This treatment by moist applications leads us to the treatment by the warm bath practiced by Hebra, who seems to have been directed to it by observing its efficacy in the management of burns. It is clear that in the case of the continued warm bath we have the conditions just mentioned completely fulfilled, and that too as regards the entire person of the patient.

"Not many years since a very large and robust man was attacked with small-pox, which soon showed itself in its worst characters. The fever at first was very high, and the head-swelling and vascularity of the face intense. The *eruption was universal*, while the pustules on the face became confluent at an early period. Delirium set in, and the patient tore off the dressings from his face so often that we desisted from their further application. After the tenth day the condition of the patient was most appalling. The delirium continued, the circulation became every day weaker and more rapid notwithstanding the free use of stimulants; the crusts were not only black, but on the legs, where here and there there was less confluence, the blackness of the worst purpura appeared; a condition held by Hebra to be always fatal. The body was one universal ulcerous sore, and the agonies of the patient from the adhesion of the surface to the bedclothes were not to be described. In addition to the usual fetor of small-pox in the stage of decrustation, which was present in the highest degree, there was an odor of a still more intensely pungent and offensive character, which seemed to pass through the by-stander like a sword. I never before or since experienced anything similar. Stimulants alone, freely and constantly employed, seemed to preserve the patient alive. The pulse was rapid, weak, and intermitting, and for several days we despaired of his life. At this juncture I happened to describe the case to my colleague, Mr. Smyly, who suggested the trial of the warm bath, with the view of relieving the terrible suffering. A bath in which he could recline was speedily procured, and pillows being adjusted in it we lifted the sufferer in and placed him in the recumbent position. The effect was instantaneous and marvelous. The delirium ceased as if by magic; it was the delirium of pain, and the patient exclaimed, 'Thank God! thank God! I am in heaven! I am in heaven! why did n't you do this before?' The fetor immediately and completely disappeared, so that on entering the ward no one could suppose that there was a case of small-pox in it. He was kept at least seven hours in the bath, during which time brandy was freely administered, and omitted only when he showed symptoms of its disagreeing with the brain. He was then removed to bed. The surface was clean, and in many places the sores looked healthy and white. The bath was repeated next day, after which he fell for the first time into a tranquil slumber. From this time his recovery was progressive, delayed only by the formation of abscesses and the great soreness of the feet. That this gentleman's life would have been sacrificed but for the timely use of the bath, few who have had any experience in prognosis can reasonably doubt. He was in the condition of a patient every portion of whose skin had been burnt and ulcerated. The pustulation was almost universally confluent, the purulent matter highly putrescent, the hemorrhagic state developed, and the nervous system suffering; in fact, he had every symptom of the worst putrid absorption." Dr. Stokes adds that even an ordinary hip-bath, in which the patient sits on a blanket, the ends of which are made to cover his shoulders and legs, is most grateful and efficacious in this loathsome disease.

NEW SEDATIVE.—Prof. Deneffe, of Ghent, states that for more than two years he has employed a combination of camphor and bromine which he thinks is entitled to general attention. The celebrated chemist Laurent showed that bromine will easily unite with camphor at the ordinary temperature, but that the product is slowly decomposed by exposure to the air. M. Swartz, Professor of Chemistry at Ghent, has shown that this body heated in a closed vessel is resolved into hydrobromic acid and a crystallized compound, which is monobromized camphor (*camphor monobromé*), a body differing only from ordinary camphor by the substitution of an atom of bromine for an atom of hydrogen. It is a perfectly crystallized substance, fusible at 76° C. and boiling at 274°. At Prof. Swartz's request, M. Deneffe has investigated the therapeutical properties of this body, and has found it to be an excellent sedative for the nervous system. He intends shortly to publish his cases in proof of this, and in the present communication furnishes one of these, in which excitement of the nervous system passing into true delirium tremens was effectually relieved. He prescribed it in the form of pills, seventy grains being made into thirty pills, of which one was given every hour until twenty had been taken. For three days longer from forty-five to sixty grains were given in the twenty-four hours, the quantity being diminished from forty-five to thirty grains daily for a week longer. The recovery was progressive and stable. (Medical Times and Gazette.)

ON TORSION AND ON THE DRESSING OF WOUNDS.—In a clinical lecture on these subjects, Mr. Callender states that seven amputations have been performed this year at Saint Bartholomew's Hospital, in all of which torsion was employed, and all of which terminated successfully. Three of the amputations were of the thigh, three of the leg, and one was of the fore-arm. The ages of the patients varied from nine to forty years. Torsion, he remarks, insures the laceration of two coats of the vessel and the formation of a coagulum, while (in this respect unlike the ligature) no foreign body is left attached to the artery, to be separated from it eventually by ulceration through the outer tunic. The twist of the artery, the tearing of the inner and middle coats, and the formation of a clot, these three provide for the permanent occlusion of the vessel. There is no record, where the operation has been properly practiced, of any sloughing of the twisted end, or of any abscess along the track of the vessel; and while the presence of a foreign body in the wound is avoided, the patient escapes the anxiety which the prospect of the removal of ligatures entails. To add one other and a strong argument in favor of torsion, it is free from all risk of that secondary bleeding which is sometimes associated with the separation of a ligature. In regard to dressing, Mr. Callender, after bringing the edges of the wound close by silver sutures, covers the stump with lint, once folded, and previously dipped in carbolic oil of the strength of one in thirty. Pads of lint or cotton-wool are then applied above and below, and the whole dressing is secured by a few turns of a bandage. (British Medical Journal.)

The Treatment of Asthma.—Dr. John C. Thorowgood observes that experiments made by Paul Bert, Traube, and others have shown that one result of irritation of the pneumogastric nerve is to cause contraction of the lungs and arrest of respiration; this arrest being more easily produced during expiration than during inspiration. The lungs themselves contract just as does a sponge when squeezed in the hand; and so long as this contraction continues, so long does the paroxysm of asthma and difficult breathing exist. Prolonged expiratory efforts, as by a violent burst of coughing or a fit of laughter, are very apt to determine a fit of spasmodic asthma in one predisposed thereto; illustrating the fact shown by the experiments above alluded to that arrest of respiration from closure of the lungs is more easily produced during expiration than during inspiration. Now, the pneumogastric nerve, as its name implies, supplies nervous filaments not only to the lungs, but also to the upper part of the alimentary canal—viz., the pharynx, œsophagus, and stomach; and hence any irritation of these parts may show its effects in the form of contracted lungs and asthmatic paroxysms. These are matters tolerably well known and understood, and yet in the practical treatment of such a complaint as spasmodic asthma we seem hardly to get that help from this physiological and anatomical knowledge to which we are fairly entitled.

Efficiently to treat spasmodic asthma in its various forms, we must recollect that we are dealing with a pulmonary neurosis, and endeavor to allay any irritation of the pneumogastric nerve as much as lies in our power. Commonly we find in a paroxysm of pure spasmodic asthma that medication of those filaments of the pneumogastric that go direct to the air-tubes and lungs by means of certain fumes and vapors—as, for example, burning niter-paper, or the smoke of stramonium or tobacco—is sufficient to relieve the spasm and cause relaxation of the air-tubes; but these are at best but temporary expedients, and naturally patients and physicians seek after some means of cure likely to be more radical and permanent in its effects. So far as the experience of Dr. Thorowgood goes, this may be found often in treatment carefully directed to the stomach and liver in the first instance; and secondly, in the use of certain tonics that have in some way or other a permanently curative power over neuroses of the lungs and heart.

Much stress is very properly laid, in books on asthma, on the patient's diet. He must not dine late, and certainly must never indulge in supper. Sound and sensible as this rule is, yet perhaps the practice of eating nothing after midday is carrying things a little too far in most cases. A state of exhaustion may be induced, which always increases any kind of nervous irritability; and further than this, the long-continued innutrition may, later in life, lead to actual structural change of a degenerative kind in the lung tissue. Dr. Thorowgood finds in practice that a small sandwich of bread and meat, or sometimes a cup of bread and milk, is very grateful to a hungry asthmatic in the evening, and in no way injurious.

The medicines that have more or less credit in the cure of asthma are almost "legion;" the reason being that some fit, as it were, one end of the pneumogastric, some another. Thus bismuth and hydrocyanic acid are of great value when the neurosis is of gastric origin. Carlsbad salt, nitric acid, and at times small doses of mercury are all unmistakably curative when the hepatic system requires relief. Other remedies, such as ipecacuanha, belladonna, nux vomica, will cover a wider range of symptoms dependent on pneumogastric disturbance; while, if we have reason to suspect a gouty or rheumatic diathesis as the root of the trouble, alkalies with iodide of potassium, sulphur, and arsenic will be the remedies indicated. While then we certainly have no "specific" for the cure asthma, we may, by considering the complaint in its wide range as a neurosis of the pneumogastric, get some very satisfactory results from treatment. (Medical Press and Circular.)

EXCISION OF THE HEAD AND NECK OF THE FEMUR IN CASES OF HIP-JOINT DISEASE.—Dr. Morton, of Glasgow, has given a clinical lecture on this subject, in which he calls attention to the mortality that has commonly attended this operation even in the hands of the most eminent surgeons, a mortality which he thinks judicious treatment may diminish. He gives the details of several cases in which he performed excision, and where he gradually became convinced that the little patients suffered much simply from their confinement to bed, though no doubt the profuse discharge materially aided in producing exhaustion. Influenced by this view, he applied a modification of Sayre's splint; and he speedily had the pleasure of seeing ten walking about the wards on crutches, and promising to be successful cases. Dr. Morton thinks the generality of authors are too prone to regard excision of the neck of the femur as a last resource, and as an operation that should not be performed until all other chances of repair, or even arrest of the disease, have been exhausted; which too often practically means until the patient is in such a condition as scarcely to afford the barest chance of a good result. *(Ib.)*

TREATMENT OF FISTULA IN ANO.—Mr. William Allingham, Surgeon to St. Mark's Hospital for Fistula, etc., says concerning fistula:* "Very few fistulæ that have existed for more than three months are without an internal opening. The internal aperture is usually situated just within the anus, in the depression which exists between the external and internal sphincters, and the reason the opening is not felt when the finger is inserted into the bowel is because the search for it is made too high up. I have seen several times what the late Mr. Syme declared could not exist, viz., two internal openings in the same patient at the same time. I recently had such a case at St. Mark's. There were internal apertures at both sides of the bowel. It is all-important that this internal aperture be felt with the finger, so that in operating it may be included in your incision; for not unfrequently, from the tortuous nature of the fistula, the probe can not readily be got through it. This is markedly the case in the horse-shoe form of fistula, which is very common. The sinus here runs round, generally dorsally, from one side of the anus to the other; so that the external and internal openings are placed on opposite sides of the bowel. This variety, if not properly diagnosed, is rarely cured by operation; the sinus being laid open on one side of the bowel, and left untouched on the other. This mistake may often be avoided by a careful examination by the finger externally, as you can feel a hardness on *both* sides of the anus."

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* Fistula, Hemorrhoids, Painful Ulcers, and other Diseases of the Rectum, their Diagnosis and Treatment. By Wm. Allingham, F. R. C. S., etc. London, 1871.

In operating for fistula, Mr. Allingham restricts the ligature to cases where the sinus runs just under the skin and mucous membrane, where there is but thin and deteriorated integument to deal with; "for if the wall of the sinus is thick, the seton only lights up fresh inflammation and an extension of the original disease, and is usually more painful and infinitely more dangerous than the knife." After having administered a purge three days prior to operating, and again the night before, he puts the patient on his side and operates in the usual manner; introduces a probe, searches for the internal opening, etc., and divides the tissues with a bistoury.

"If there be no internal opening, you will almost always find some part where only mucous membrane intervenes between the point of the probe and your finger. At this spot work the director through, and bring down the point as before. When you have divided the fistula from the external to the internal opening, search higher with the probe for any sinus running up beyond the internal opening. If this exists, you should lay it open. I know many authorities have stated that it is only necessary to incise the fistula between its external and internal openings, and that the sinus above the internal opening will spontaneously close. In the great majority of cases you will not cure your patient unless you lay the whole sinus open from end to end. Over and over again I have left the sinus above the internal opening uninterfered with, and almost invariably have had to regret it and perform a second operation. Having then opened the fistula in its whole upward length, search for lateral sinuses extending from the outer opening; also see if there be any burrowing outward beyond the outer opening. A fistulous orifice is often not at either end of the sinus, but in its middle. Be careful to see if from the track of the main sinus no other runs deeper beneath it. Frequently, in fact nearly always in old-standing cases, this deeper sinus does exist, and unless it is incised with the rest the patient will not get well. I am certain you can never guarantee the healing of a fistula as long as any lateral or deep sinuses remain, and so long as they do remain *fresh* sinuses will form. I speak with the utmost confidence that it is better in the large majority of instances to err on the side of doing too much than too little. Very extensive incisions, *if properly treated afterward*, will heal with astonishing rapidity and certainty if all the sinuses are slit up; but limited incisions will not heal as long as any lateral or deep fistula exists. As a rule, it is the best practice to lay open the original sinus first and the tributary ones after. When all the sinuses are slit up, with a pair of scissors take off a portion of the *overlapping* edges of skin; they are often thin and livid, having very little vitality. If not removed they will fall down into the wound and materially retard the healing process. When several sinuses have to be laid open, I am in the habit of carefully preserving islets of skin from the edges of which granulations will take place, and by which cicatrization is materially hastened. In old-standing cases, where there is much induration, it is very good practice to draw a straight knife through the dense track of the fistula, and outward beyond the external opening. It is wonderful after this how rapidly quite cartilaginous hardness passes away. Having completed your operation, take some finely-carded cotton-wool, and with a probe place it well into the bottom of the wound, packing it into every part, and being the more particular about this if your incisions have been extensive or pass high up the bowel, or if the parts are very dense and gristly (as they are in old fistula, and especially in cases operated upon for the second time). A good firm pad of wool should then be placed between the buttocks over the wound, and a T bandage firmly applied. With these precautions you need never fear hemorrhage; for if the bleeding be thus arrested by pressure at first, all will be well. The most painful form of fistula, at the same time fortunately the most uncommon, is the blind internal. I have seen many cases where the aperture was as large in circumference as a threepenny-piece; then the fæces, especially when liquid, pass into the sinus and cause great suffering—a burning pain often lasting all day, after the bowels have acted. In operating upon a blind internal fistula, if you can feel by the hardness externally the site of the abscess, you may plunge your knife into it, and thus make a complete fistula, through which, of course, you pass your director. If you can not feel any hardness or see any discoloration to guide you to the situation of the sac of the abscess, the best way of proceeding is to bend a silver probe-director into the form of a hook, and then hook this into the internal aperture, and bring the point down close under the skin; when you cut upon it, thrust it through, and complete the operation. In operating upon women suffering from fistulæ, especially when the sinus is near the perineum, cut as little as possible; for anything like too free incisions are apt to end in incontinence of fæces, or at all events in such partial loss of power in the sphincter as to prevent the patient retaining flatus, which I need scarcely say is a most disagreeable result to an operation. After the operation for fistula the bowels should be kept confined for three days; a gentle purge may then be administered, and full diet allowed. The wool generally comes out on the bowels acting; but if it does not come away I remove it. If much wool has been put into the rectum to prevent hemorrhage, I generally remove a portion of it the next day, only leaving some at the bottom of the wound. If the whole plug is left in, the patient will probably be very uncomfortable, as he can not easily get rid of wind; and the danger of primary hemorrhage being over in twenty-four hours, there is nothing gained by retaining a bulk of wool in the bowel. Very little dressing is required in the after-treatment of fistula; in fact, it is better to do too little than too much. A little cotton wadding or fine oakum laid quite gently in the wound, to absorb the discharge and keep the edges from uniting, is all that is wanted. Only when the wound is unhealthy or sluggish do I prescribe lotions; then, according to circumstances, black wash, carbolic acid, nitric acid, the persulphate of tartrate of iron lotions may be advantageous. When the odor is offensive it may be removed by a weak solution of carbolic acid and compound tincture of iodine. As a rule, ointments and lotions do harm rather than good; but have the wound well syringed twice in the day with lukewarm water. Be always on the watch during the healing process for any burrowing or formation of fresh sinuses. Such development is always indicated by the sudden (and otherwise unaccountable) augmentation of the purulent discharge. Whenever a wound secretes more than its surface seems from your experience to warrant, be sure that burrowing has commenced, and search diligently for the sinus at once; for the longer it is left the larger and deeper it will get. Sometimes it is under the edges of the wound that it commences, at others at the end of the wound, internally or externally; and occasionally it seems to dive down from the base of the main fistula. When the sinus is discovered it must be opened at once. During the healing do not purge your patient much, but take care that the bowels are fairly relieved. Never, if you can avoid it, operate upon a fistula that is from any cause acutely inflamed. While inflammation is going on fresh sinuses are sure to form, the areolar tissue breaking down so readily. If you operate under these conditions failure is almost certain to result. All you ought to do in such a case is to make a free depending opening, and keep the patient at rest until the inflammation subsides, the sac of the abscess contracts, and the formation of sinuses for a time is completed. In old-standing cases of ulceration and stricture of the rectum fistulæ almost invariably form; but the internal opening is very rarely above the stricture, where, from reasoning, one would think it would be. Sometimes it opens into the stricture itself, but nearly always *nearer the anus than the stricture.*"

On the subject of fistula in conjunction with phthisis, Mr. Allingham writes: "Fistulæ in persons of a phthisical tendency are marked by certain peculiarities. They have a disposition to undermine the skin and mucous membrane with remarkable rapidity, but not to burrow deeply. The internal aperture is almost always large and open. On passing your finger into the bowel you can feel it most distinctly, often as large as a threepenny-piece. The external opening is also frequently large and ragged, not round; it is irregular in form; the skin surrounding it is livid and flapping. When you pass your probe into this aperture you can sweep it round over an area of more than an inch, and not infrequently the skin is so thin that you can see the probe beneath. The discharge is thin, watery, and curdy, very rarely really purulent. The *sphincter muscles* are almost invariably *very weak.* When you introduce the finger into the bowel you are hardly sensible of any resistance being offered. I think this a most important indication of constitutional weakness, and from it I derive this practical lesson: *When operating upon a patient with phthisical proclivity interfere as little as possible with the sphincter muscles, especially the internal.* If you have a phthisical patient suffering from a fistula which gives him much pain or inconvenience, by taking certain precautions you may relieve him of it without running any danger of damaging him at all. When a case of this kind comes to me I am never in a hurry to operate. I like to watch the patient for a little while and observe whether the lung-disease is advancing, find out if the cough is constant. Often these patients will tell you that they cough very little, when their friends notice that they do so almost perpetually. Wait, if you can, for genial weather, when your patient need not be confined to a close room. As to the operation, I have already said that, although it must be *thorough*, you should interfere with the sphincter as little as you can; and fortunately it is not usually necessary, as the sinuses are mostly superficial. After the operation let the patient have good diet, by all means plenty of milk. If he can take it, he may have a little cod-liver oil and steel and quinine, separate or combined. Do not confine him to bed; let him lie on a mattress. If you can manage it, let the bedroom face south or west, and get plenty of fresh air into the room; the patient lying well covered up on a couch by the open window for hours, in fact nearly all day. Do all you can to keep him amused and cheerful. Avoid poulticing the wound; disturb it as little as possible; keep it clean by well syringing night and morning; and use a little astringent lotion if necessary, but no ointments. Do not be in a hurry to get the bowels open, and manage this rather by diet and laxatives than a purge. If you set up a diarrhea in these patients it will give you trouble and delay the healing of the wound. Unless there is furring of the tongue, headache, or loss of appetite, I do not think the bowels need be relieved more than once in three or four days. All these matters may seem so trivial that there is but little occasion to mention them; but I am sure that attention to apparent trifles will make just the difference between success and failure."

OPERATIONS UPON HEMORRHOIDS.—Mr. Wm. Allingham, in speaking of the relative merits of the ligature and the clamp and cautery in the treatment of hemorrhoids, gives the preference to the ligature, for which he claims the following advantages: 1. The rapidity with which it may be executed. He has often operated upon four or five hemorrhoids, returned them, and removed redundant skin in one minute and a half or two minutes. 2. There is only a very small amount of tissue included in the ligature; in fact, little more than the vessels supplying the tumor. 3. At least three quarters of the wound is a simple incised wound, which heals rapidly, only the small portion included in the ligature having to slough away. 4. The ligatures are tied a considerable distance from the anus, so that when returned into the bowel they lie above the internal sphincter, where the sensibility of the mucous membrane is not acute, and consequently the pain and irritation after the operation are reduced to a minimum. 5. The operation is wonderfully free from danger to life, and its results are generally satisfactory. He does not think that in the whole range of surgery there is any procedure worthy the name of operation which can show a greater amount of success. In describing the mode of treating hemorrhoids and prolapsus by the ligature, he refers to the operation about to be described, and not to the usual method of applying the ligature by transfixion of the base of the pile, and tying it in halves.

"The patient, having had the alimentary canal thoronghly cleaned out, should have an enema of warm water, and be directed to strain the piles well down while evacuating the injection. This being accomplished, place the patient, upon a hard couch or mattress, on the right side, with a little tendency to roll over on to the stomach. The knees are to be drawn up to the abdomen; and if the patient has the courage to strain down during the operation, he will very much facilitate the manipulations. The assistant should stand with his back toward the patient's head, and raise the upper buttock with his right hand. At the same time, by hooking his elbow over the pelvis, he can keep the patient in position. The surgeon then with a vulsellum or pronged hook seizes the hemorrhoids one after another, draws them down, and then with a pair of sharp, strong spring-scissors separates the pile from its connection with the muscular and submucous tissue upon which it rests. The cut is to be made in the sulcus or white mark which is seen where the skin meets the mucous membrane; and this incision is to be carried up the bowel, and parallel to it, to such a distance that the pile is left connected by an isthmus of vessels and mucous membrane only. There is no danger in making this incision, because all the large vessels come from above, running parallel with the bowel, *just beneath* the *mucous membrane*, and thus enter the *upper part* of the pile. A well-waxed, strong silk ligature is now to be placed at the bottom of the deep groove you have made, and the assistant then drawing out the pile with some decision, the ligature is tied high up at the neck of the tumor as tight as possible. If this be done, *all the vessels must* be included. The silk should be so strong that you can not break it by fair pulling. A portion of the pile may now be cut off, taking care to leave sufficient stump beyond the ligature to guard against its slipping. When all the hemorrhoids are thus tied they should be *returned thoroughly* within the sphincter. After this is done any superabundant skin which remains apparent may be cut off; but this should not be too freely excised for fear of contraction on the healing. An injection of liq. opii sedativus may be administered. I always place a pad of wool over the anus, and a tight T bandage, as it relieves pain most materially.

"It is advisable to commence operating upon those piles that are situated inferiorly as the patient lies, in order that the others may not be obscured by blood; but when the hemorrhoids are numerous, and there is a small perineal or dorsal pile, as there frequently is, it is better to tie the small ones first, as there is danger of their being overlooked or becoming retracted, and thus rendered very difficult to find when the larger hemorrhoids have been ligatured. When the patient has chloroform, unless the surgeon takes care, it sometimes happens that the protruded piles slip up into the bowel again. You need give yourself no anxiety about it. When the patient is fully under the influence of the anæsthetic you can, by opening the anus with your fingers, easily coax the piles down again, and if you take hold of one with the vulsellum the rest will speedily follow; but should there be difficulty arising out of *spasm* of the sphincter (as sometimes occurs in cases where the chloroform is not well borne), you can at once overcome that by forcibly but slowly dilating the sphincter, by introducing two fingers into the bowel and separating them toward the tuberosities of the ischia. In women the object can be readily attained by inserting a finger into the vagina and pushing the rectum down. Some temporary but possibly rather acute pain may be experienced on the first action of the bowels, and also a slight discharge of blood *may* take place; but it is by no means always so.

"After the operation the bowels should be confined for three or four days by an astringent draught, such as: pulv. cret. aromat., ℈j; tinct. opii, *m*xv; spt. æth. nit., ʒj; mist camphoræ, ad ℥jss; to be taken night and morning, or three times in the day, for two days. This will very much assuage pain, prevent the tendency to strain, and keep the bowels confined. The diet at first should be light; no alcohol at all should be taken. On the third or fourth night a mild aperient may be administered, and after it has acted a more liberal diet may be allowed."

Mr. A. enjoins that the patient should keep lying down until the ligatures separate, which almost invariably takes place about the sixth or seventh day. *Active exertion*, even after the separation of the ligatures, he deprecates until the sores left in the rectum are quite healed, a fortnight being generally about the time required to accomplish this.

"However acute the pain may be at first, in about six hours after the operation it subsides and comparative ease follows. You may always comfort your patient by the assurance that he knows the worst of it, and that the pain will surely, if gradually, become less. I am quite convinced that the higher you carry your incision up the bowel the less does the patient suffer, because the ligatures are removed from the most sensitive part of the rectum, and lie quietly above the sphincters. In favorable cases the pain is by no means very severe. After the ligatures come away I always direct my patients to douche the anus well night and morning with cold water. This is very comforting, and materially hastens the convalescence."

On the Treatment of Bedsores.—Dr. William A. Hammond, in his Treatise on Diseases of the Nervous System, says, in the chapter on "Spinal Meningitis," that for the cure of bedsores the method recommended by Dr. Brown-Séquard may be used. It consists in the alternate application of sponges, one of which is saturated with hot water and the other with cold water. This should be done for five or ten minutes every day, and the effect is to increase the activity of the circulation of the part and to promote the formation of granulations. But Dr. H. generally prefers the method by galvanism first suggested by Crussel, of St. Petersburg, and which he used in indolent ulcers with almost invariable success in 1859, when surgeon to the Baltimore Infirmary. During the last six years he has employed it to a great extent in the treatment of bedsores caused by diseases of the spinal cord, and with scarcely a failure; indeed he may say without any failure, except in two cases where deep sinuses had formed, which could not be reached by the apparatus. A thin silver plate, no thicker than a sheet of paper, is cut to the exact size and shape of the bedsore. A zinc plate of about the same size is connected with the silver plate by a fine silver or copper wire six or eight inches in length. The silver plate is then placed in immediate contact with the bedsore, and the zinc plate on some part of the skin above, a piece of chamois-skin soaked in vinegar intervening. This must be kept moist, or there is little or no action of the battery. Within a few hours the effect is perceptible, and in a day or two the cure is complete in the great majority of cases. In a few instances a longer time is required. He has frequently seen bedsores three or four inches in diameter, and half an inch deep, heal entirely over in forty-eight hours. Mr. Spencer Wells states that he has often witnessed large ulcers covered with granulations within twenty-four hours, and completely filled up and cicatrization begun in forty-eight hours. During his recent visit to this country he reiterated his opinion that it was the best of all methods for treating ulcers of indolent character and bedsores. (Rankin's Half-yearly Abstract.)

TREATMENT OF CHRONIC DIARRHEA.—Dr. Eustace Smith, in his work on Wasting Diseases of Infants and Children, recommends the following plan of treating obstinate cases of chronic diarrhea: "All food must be stopped, and the child must be nourished in the following way: A piece of raw mutton or rump steak, free from gristle or fat, is finely minced, and is pounded in a mortar till it is converted into a pulp. The pulp is then strained through a fine sieve or a piece of muslin to remove the blood-vessels and cellular tissue. Of the meat so prepared a tea-spoonful is given at regular intervals four times in the day, and every day the quantity administered is gradually increased until half a pound is taken each day in divided doses. During this treatment *no other food of any kind must be allowed*, and no fluid but thin barley-water, or a drink made by mixing the unboiled whites of three eggs in a pint of water, sweetening it, and flavoring with a little orange-flower water. This diet usually causes the motions to have an intensely offensive smell; but this is of no consequence, and the parents should be warned of its liability to occur. The patients themselves often like this food, and take it eagerly. If, however, as may happen, they show any repugnance to it, the pulp may be sweetened with white sugar, or a little confection of roses may be added to make it more palatable, or it may be given in a small quantity of veal-broth.

As medicine, we must give at the same time the bismuth and chalk mixture, with the addition of one drop of tinct. opii to each dose." *(Ibid.)*

On Cancer of the Uterus and Chronic Inflammation of the Cervix Uteri.—Dr. Lombe Atthill, of Dublin, has arranged (Medical Press and Circular) the symptoms of these two affections in the following manner:

In Chronic Inflammation of Cervix.	*In Cancer.*
The history of the case is always chronic, often dating back several years.	History—Symptoms seldom noticed until within a comparatively recent period.
Pain—Always present; generally more severe over left ovary than elsewhere.	Pain — Seldom felt in the early stages; most severe in the back.
Menstruation — Scanty and frequently painful.	Menstruation — If the patient be young, will be increased; if advanced in life, hemorrhage may be the first symptom noticed.
Digital examination—Cervix feels hard to the touch, but smooth; pressure with the finger causes pain.	Digital examination—Cervix indurated, uneven, and nodulated; pressure does not cause pain.
Uterus—Movable.	Uterus—Fixed.
Vagina—Not implicated.	Vagina—Frequently implicated.
Discharge—Inodorous and mucopurulent.	Discharge—Generally fetid.

Having given an outline of the ordinary course which cancer of the uterus follows, and dwelt on its leading features and symptoms, Dr. Atthill in conclusion alludes to the treatment. With the view of deadening the pain, opium in some shape or form must still be our main reliance. Chloral will often fail, if the sufferings be excessive, even to produce the sleep. If it does not, Dr. Atthill prefers it to opium. It will have to be given in doses of from twenty to forty grains at bed-time. One objection to the administration of this medicine in large doses is the quantity of fluid in which it is requisite to have it dissolved, namely, ten grains of the salt to an ounce of fluid. The syrup of orange-peel best cloaks its nauseous taste; the addition of half a grain of codia to each dose greatly increases its hypnotic powers. Opium is best administered either per rectum, in the form of suppositories, or by being injected subcutaneously, commencing with one eighth or one fourth of a grain of morphia. No doubt the subcutaneous injection of morphia acts more rapidly, and its effects last longer than those of opium administered in any other manner, while it is less deleterious in its after-consequences. Of astringents administered with the view of checking the hemorrhage, gallic acid is, Dr. Atthill thinks, the best. If the bleeding be very severe, we may be compelled to plug the vagina; but Dr. Atthill prefers in these cases endeavoring to stop it by the direct application to the cervix of a pledget of cotton saturated with a strong solution of the perchloride of iron in glycerine. To lessen the fetor of the discharge, add half an ounce of Condy's fluid to a pint of tepid water, and direct this quantity to be thrown up the vagina at least twice a day. Another lotion which is sometimes useful both in allaying the pain and lessening the discharge is a solution of nitrate of silver of the strength of ten grains to the ounce. Two or three ounces of this should be injected at a time. Of internal remedies, arsenic and iron are the only ones which will effect any good. Dr. A. confines himself nearly altogether to the administration of the latter; and of its various preparations he prefers either the tincture of the perchloride, or, if the stomach be irritable, the ammonia-citrate of iron. The diet should be nourishing, but unstimulating. In cases of cauliflower excrescence there is always the chance, if seen early, of prolonging life by amputating the cervix, or of destroying the growth by repeated applications of caustic potash. *(Ib.)*

ON PURULENT INFECTION.—Dr. Guérin concludes *(Gazette Hebdomadaire)* a paper on this subject as follows: 1. The affection designated as *purulent infection* or *pyæmia* should be called *surgical typhus.* 2. Like the other forms of typhus with which it has the greatest analogy, it is the result of blood-poisoning.

3. It proceeds from the absorption of deleterious miasms engendered at the surface of wounds. 4. It gives rise to the formation of metastatic abscesses, and produces a lesion which has been described under the name of infarctions. 5. These infarctions, like abscesses, proceed from the action of the poison on the tissues where they are developed. 6. Although by experiments in which the circulation is obstructed by injections into the veins one may produce abscesses and infarctions, still it is not right to maintain that these lesions can not result from the influence of miasmatic emanations acting during life upon those parts of the body in which they are afterward found. 7. Surgical typhus is an essentially different disease from putrid infection. 8. These two affections, although different, belong to the class of septicæmia. 9. Traumatic fever ought not to be ranked in the same class. There is nothing to show that this affection results, as has been maintained, from the absorption of a poison. 10. Surgical typhus is an infectious disease. 11. The poisoning agent can not yet be designated except by the vague term of *miasm.* What has been described under the name of sulphate of sepsine seems to be nothing more than a material acting like all putrid substances. 12. Sulphate of sepsine has been found in yeast. 13. In order to prevent or hinder the production of surgical typhus, one ought, when the patients can not be isolated, to guard the wounds from the contact of contaminated air. Dressing with cotton-wool seems to be the most certain means of attaining this end. 14. The best medicinal agent in surgical typhus is sulphate of quinine, in doses of from two to four grammes. *(Ibid.)*

Notes and Queries.

Paracentesis performed in a Case of Ascites One Hundred and Thirty-six Times.—Drs. Haymaker and Graham, of Oregon, Ind., communicate the following extraordinary case: "Mrs. Christiana Gyer, aged sixty-one years, mother of three children, suffered in the summer of 1853 from œdema of the lower extremities, which was soon followed by ascites. Under the use of medicines the effusion disappeared. In the spring of 1854 the ascites returned, and became so urgent that she was tapped, in May, by Dr. Morrison, of Lexington, Ind., and ten gallons of fluid removed. Since that time she has been regularly tapped by her husband, at intervals of from six to twelve weeks, an average of five gallons being removed at each operation. She has now had paracentesis abdominis performed one hundred and thirty-six times in less than eighteen years, and the enormous amount of six hundred and eighty-five gallons thus removed. This patient takes no medicine, does all her own house-work, and bids fair to live to be a hundred years old."

This certainly is a remarkable history. More than twenty-one barrels of fluid from the peritoneal cavity—or, putting the matter in *weight* instead of *measure*, some six thousand eight hundred and fifty pounds—in less than eighteen years! We feel like following the sentence by at least half a dozen exclamation points. It certainly is more remarkable than the noted case of Dr. Mead's; for his patient, a female, had only about two thousand pounds removed in seven years and six months; and then, too, she died! Thinking that she had a most wonderful experience, in her will she directed that the fact mentioned above should be recorded upon her tombstone. Fortunately she can not be disturbed by the fact that Mrs. Christiana Gyer, having the same disease, has lived with it more than twice as long, and has had extracted from her nearly five thousand pounds more.

Cann reported to the Academy of Medicine, Paris, 1842, the case of a female with ascites fifteen years, who was tapped eight hundred and eighty-six times, and was cured. Our Indiana case must yield to this. T. P.

Mathematics among the Flaps.—We have ourselves had something to say about mathematics and mathematicians, but have yet to see anything which approaches the following from our spirited contemporary, the Boston Medical and Surgical Journal:

"We are gratified to believe that science is still on the march. The following directions for amputating the leg are taken from an article of six quarto pages on this subject in the *Gazette Hebdomadaire*, and will, we trust, be favorably received by our progressive friends here. We hasten to translate them:

"'*Traumatic surface.* I will suppose that the limb amputated is a cylinder consisting of a single bone surrounded by flesh, the arm for example, and that it has a radius of five centimetres.

"'(*a*) The circular amputation is performed, the skin being cut at a distance equal to a half of three times the radius, or 7.5 centimetres, below the bone. After the retraction of the muscles a funnel-shape is obtained of not more than 5 cm. in depth instead of 7.5 cm. The surface of this hollow cone, considering the osseous section as a point, is given by the formula πRl, in which l, the generator of the cone, $= \sqrt{R^2 + H^2}$, H being the length of the retracted skin measured from the level of the osseous section. $R = 5$, $R^2 = 25$; $H = 5$ approximately, hence $H^2 = 25$, and therefore $1 = \sqrt{25 + 25} = \sqrt{50} = 7$; the surface of the cone, $\pi Rl = 3.1416 \times 5 \times 7 = 110$ square centimetres.

"'(*b*) The amputation is made by two rounded flaps, of a length equal to 7.5 cm., reduced to 5 cm. after retraction. The two flaps have the cut surfaces of a semi-elliptical form equal to each other;

the total surface is then an ellipse, whose smaller axis is the diameter of the limb $=$ 10 cm. and the larger 14 cm.; that is to say, twice 7, a figure which obtains for both flaps, as the generator of the cone l. The surface of the ellipse is given by the formula πAB, A and B representing the unequal demiaxes of the ellipse, that is, 5 and 7; the total surface is $3.1416 \times 5 \times 7 = 110$ square centimetres, the same as in the circular infundibuliform operation.'

"Now let the reader carefully observe the following significant difference in the single flap operation, and draw his own conclusions.

"'(*c*) With a single rounded flap of 15 cm., reduced by contraction to 10 cm., the whole traumatic surface comprehends two parts. *First*, a semicircle, transverse section of half the cylinder, or $\frac{\pi R^2}{2} = \frac{3.1416 \times 25}{2} = 39$ square centimetres; *second*, a semi-ellipse of which the short radius is 5, and the greater $= \sqrt{R^2 + H^2}$; here $H = 10$; whence $\sqrt{25 + 100}$, or 11, which gives by the formula $\frac{\pi AB}{2}$, the result $\frac{3.1416 \times 5 \times 11}{2} = 86$. To sum up, the bleeding surface measures 39 cm. $+$ 86 cm. $=$ 125 square centimetres.'

"All this is indeed as it should be. After the above calculations there is supposed to be an interval of rest, during which an opportunity is afforded for these equations, which express feelings we have long stifled, to heal and make a stump; the stump of progressive science. It is plain that no sloughing nor hospital gangrene nor retraction of skin nor necrosis of the bone is likely to occur with mathematical flaps, and yet is it wholly wise to ignore these frequent contingencies? Why not take them into the calculation in the characters of x and y, for example; and why not let a poultice $=$ P, and carbolic acid appear in its natural character of $C^6 H^5 - O - H$; and so by interweaving and mixing a poultice with the mathematics make this amputation still more complete? Every modern surgeon of pretension will of course carry the flap equations in his waistcoat pocket, and will recognize the importance of a blackboard in the operating theater. For ourselves we are prepared to concede that the steadiness of an old-fashioned surgeon sinks to the level of a delirium tremens when compared with this extraction of a surgical square root upon the brink of an important operation or in the bosom of an agonized family. Rival surgeons hurrying to a scene of disaster, each with a complete amputating case under one arm, will in future be observed to carry a slate and pencil under the other; or better still, will ingeniously add a slate to the surreptitious spirit-lamp, test-tube and bottles, urinometer, stethoscope, and thermometer, lately contrived in England, to be constantly carried in the crown of every true practitioner's hat."

MUSEUM.—The following circular explains itself:

"It is our intention to form a museum for the exhibition, during the session of the American Medical Association in this city, of objects of interest and instruction, such as: 1. New Instruments and Appliances in Medicine, Surgery, and Midwifery; 2. New Drugs and Preparations; 3. Pathological, Physiological, Anatomical, and Microscopical Specimens; 4. Photographs, Drawings, Casts, and Models of Pathological Specimens; 5. New Books, American and Foreign.

"You are cordially invited to contribute any of the above objects, subject to the following conditions: All the objects intended for exhibition must be addressed "Care of the Committee on Exhibition, Thirteenth and Locust Streets, Philadelphia, Pa.;" be delivered on or before April 23d, and be removed on or before May 18th. All expenses connected with packing and carriage, and all risk from injury or loss, must be borne by the exhibitors. Every object must be accompanied by a written or printed description, together with a short notice for insertion in the catalogue.

"Exhibitors on the above occasion are requested to inform the committee at as early a date as possible, in order that a suitable award of space may be made for the display of contributions.

FRANK P. MAURY, M.D.,
WILLIAM PEPPER, M.D.

THE LIBRARY OF THE LATE PROF. GEORGE C. BLACKMAN.—We learn that this library, which contains upward of three thousand volumes of medical works besides very many pamphlets, papers, and journals, will soon be offered at public sale. A catalogue of the books is being prepared, and can be had on application to Mr. Robert Clarke, of Cincinnati. It was the wish of Dr. Blackman, and is now the wish of his wife, that his very fine collection of books should be kept unbroken. It is indeed to be hoped that this very natural wish will be gratified. Dr. Blackman loved his books, and spent a great deal of time in collecting them and in their company. We trust that either some public institution or private individual may be found who will pay a liberal price for the library as it stands. Besides preserving a very large and very excellent library, one selected with great care and expense, it would be a direct contribution to the widow and children of the lamented deceased. Dr. Blackman died, as we fear most doctors in this country do die, poor. He worked his work with an eye single to the glory of his calling, giving no thought to the lower yet not less necessary every-day business of life. He had no knowledge of finance, and knew nothing of the value of money. He loved his profession, his friends, and his books. It is said that many of the works in his library contain marginal notes, criticisms, comments, etc., in his handwriting. No doubt some of these notes are more valuable than the books themselves, for there were very few such thinkers in the profession as George Blackman. The number of rare and costly works in the collection is represented as very large. We reiterate the hope that a purchaser may be found who, after paying a liberal price for the books, will keep them together. The library really ought to be owned by some public institution.

THE UNIVERSITY OF LOUISVILLE.—The Thirty-fifth Commencement of the Medical Department of this University was held in Weisiger Hall on March 1st. The degree of Doctor in Medicine was conferred on eighty-four gentlemen. The *ad eundem* degree was conferred on Thomas A. Graham, M. D., of Indiana; Jas. S. Davis, M. D., of Mississippi; Samuel T. Cull, M. D., of Kentucky; Geo. N. Dugan, M. D., of Indiana; and William McGregor Burns, M. D., of Scotland. The gold medal of the Faculty, offered for the best written thesis, was won by Hamilton A. West, M. D., of Kentucky. A prize offered by Messrs. Arthur Peter & Co., the druggists, was awarded to Virgil U. Moss, M. D., for the second best thesis. The gold medal offered by Prof. Bell for the best thesis on Bright's diseases of the kidneys was awarded to J. H. Leslie, M. D., of Kentucky. In handing it to Dr. Leslie, the Hon. Isaac Caldwell, President of the Board of Trustees, said: "This medal was sharply contested, but you have well and worthily won it." The offer of this prize produced a number of theses of unusual merit, their authors deserving honorable mention in the order named: William P. Buck, M. D., of Tennessee; Henry Albert Cottell, M. D., of Kentucky; H. C. Robinson, M. D., of Indiana; Willian H. Mixon, M. D., of Arkansas; George W. Allen, M. D., of Texas; William Penny, M. D., of Mississippi. The book prize offered by Messrs. John P. Morton & Co. was awarded to Hartwell Allison, M. D., of Louisiana, for the excellence of his thesis. Honorable mention was made of M. A. Masson, of Pennsylvania; Isaac Case, of Tennessee; Jacob B. Walker, J. E. Johnson, William Doherty, of Kentucky. The valedictory of the Faculty was delivered by Prof. R. O. Cowling, M. D. It will be found published as a supplement.

THE CENTRAL KENTUCKY MEDICAL ASSOCIATION held its fourth regular meeting at Lancaster on the 17th of January. The president, Dr. Spilman, made a few pointed remarks on the importance of medical organization, and the necessity for medical men making united and harmonious efforts to advance a noble science, and maintain the honor and dignity of their calling. Dr. Huffman then read a paper on syphilis. He adopted the usual division of the disease into primary, secondary, and tertiary. He recommended that no active treatment be used for the first stage, but simply a preparation of the system by tonics for the coming attack; in the second stage he considered mercury the best of all remedies; in the third stage he thought iodide of potassium had better claims than any other agent.

Dr. J. D. Jackson read "A Critique of Lister's Septic Germ Theory, and the use of Carbolic Acid as an Antiseptic in Surgery." He also exhibited a double spleen from a hog, and some specimens of Chinese medicine, consisting of dried centipedes, snake cuticle, etc.

Dr. Harlan presented the heart of a negro man recently dead, which was considerably enlarged, weighing thirty-one ounces, and was associated with aneurism of the ascending aorta. The patient suffered intensely from facial neuralgia, with excited and disturbed action of the heart; but until a short time before his death was able to take active and laborious exercise, work in the harvest-field, etc.

On motion of Dr. Jackson, the Association was divided into four sections, to report quarterly upon the progress of medicine, etc. The section on the Practice of Medicine, Physiology, and Medical Pathology was assigned to Garrard County; Dr. Burdett chairman, report July, 1872. The section on Surgery, Anatomy, and Surgical Pathology was assigned to Boyle County; Dr. J. D. Jackson chairman, report October, 1872. The section on Midwifery, Gynecology, and Diseases of Children was assigned to Lincoln County; Dr. McRoberts chairman, report January, 1873. The section on Materia Medica, Therapeutics, Hygiene, and Chemistry was assigned to Mercer County; Dr. Forsythe chairman, report April, 1873.

The following members were appointed to solicit subscriptions for the relief of the suffering medical men of Chicago: Drs. McRoberts, of Lincoln; Reid, of Garrard; Jackson, of Boyle; and Kyle, of Mercer.

Drs. Brown, Dunlap, Burdett, and Price were appointed delegates to attend the meeting of the Kentucky State Medical Society, to be held at Louisville, April 2, 1872.

The following officers were elected for the ensuing year: President, Dr. H. Brown; vice-president, Dr. J. M. Reid; recording secretary, Dr. A. D. Price; corresponding secretary, Dr. W. Huffman; treasurer, Dr. W. B. Harlan.

The Garrard County Medical Association gave a handsome entertainment to the members of the Association, which then adjourned to meet at Danville, April 17th, when Dr. Plummer will open the discussion on small-pox.

A. D. PRICE, M. D., Secretary.

KENTUCKY STATE MEDICAL SOCIETY.—We issue the present number of the AMERICAN PRACTITIONER in advance of the usual time, in order that we may again call the attention of Kentucky physicians to the meeting of the State Medical Society. This body will meet in Louisville on the first Tuesday in April. We have reason to expect a large attendance. It is the duty of the physicians of Kentucky to make some sacrifices, if necessary, to be present on the occasion. They owe it to themselves and to the reputation of medicine in the state to attend. The physicians of Louisville will extend them a hearty welcome, and do all in their power to make their sojourn both profitable and pleasant.

THE AMERICAN PRACTITIONER.

MAY, 1872.

> Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.—RUSKIN.

Original Communications.

PRESENT STATE OF ELECTRO-THERAPEUTICS.*

BY A. D. ROCKWELL, M. D.

Electricity in its relations to practical medicine has for many years been little more than a dead letter in the therapeutical alphabet. Recently, however, a very decided and remarkable interest seems to have been revived, both here and in Europe, in this department of our profession; and it is to be hoped that this fascinating field of research will not again be given over to the tender mercies of charlatanical greed.

In the brief time allotted to me it would be vain to attempt a comprehensive and at the same time a minute exposition of even a single division of my subject. I propose therefore to offer a few words, first, on the physics and physiology of electricity; second, to give a general summary of the different methods of its application; third, to estimate, if possible, the measure of benefit to be derived in the treatment of disease by its judicious and scientific use.

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* Read by invitation before the last session of the New York State Medical Society.

The terminology of electro-therapeutics has been and is in such a vague and uncertain condition that intelligent conversation with one who is not specially versed in the subject is well-nigh impossible. Let me then at the outset, at the risk of being thought to dwell unnecessarily on the simple facts of electro-physics with which we are all supposed to be familiar, say that electricity is manifested in three forms; viz., magnetism, static electricity, and current electricity.

Magnetism. The magnet need not detain us. As a therapeutic agent it is of little or no importance, and the beneficial results supposed to have been obtained by its use in certain neuralgias depend doubtless on mental excitation.

Static electricity. Static electricity, as is well known, is generated by friction, and denotes the electrical condition of bodies in which electricity remains insulated or stationary. By passing a number of electrical discharges through the air Priestly succeeded in forming an acid out of oxygen and nitrogen; thus demonstrating the presence of a chemical effect. It was, however, proved conclusively by Faraday, whose researches in this department were most elaborate, that as the quantity of electricity generated by any frictional machine is exceedingly, almost infinitesimally, small, so static electricity possesses very feeble chemical or electrolytic effects. When applied to the head it has power to produce a distinct physiological action on the brain only when its tension is so great as to endanger health and even life. Of the nerves of special sense the optic and gustatory alone are sensibly affected by it. The peculiar smell that is perceived when an electrical machine is in operation near by, and which was supposed to have been due to an excited state of the olfactory nerve, we now understand to be due to the development of ozone. Static electricity then deserves no further consideration in this paper. Its want of decided chemical effect renders it of little use in electro-surgery, while most of the indications for its use in medicine are met more effectually by the faradic current.

Current (*dynamic*) *electricity.* Under the term current electricity must be included both galvanic and faradic electricity. Galvanic electricity is generated by the action of gases or fluids or metals, or by the contact of two dissimilar conductors. The quantity of galvanism developed by the action of fluids upon metals depends, first, upon the extent of surface acted on by the fluids; and second, on the strength of the fluids. Thus plates of zinc and copper, each two inches square, immersed in a solution of sulphate of copper, generate but half the quantity of electricity produced by the action of the same solution on plates presenting twice the extent of surface. What we term intensity or tension depends on the number of cells that are brought into the circuit. The electric tension of every compound battery is increased with every cell that is added; but it must be remembered that the quantity of electricity from a battery containing any number of cells is no greater than the amount generated by the first cell of the series. To obtain therefore a sufficient quantity of galvanism to raise a platinum wire to a white heat, for the purposes of cauterization and amputation, we require but a few large elements, say four or five. This gives a sufficient volume of current to overcome the great resistance offered by the platinum without developing any marked electrolytic effects. The galvanic current affects powerfully by reflex as well as by direct action. Applied to any portion of the head or face so as to affect the retina, directly or indirectly, through any of the nerve branches, a flash of light is at once perceived, and with a little care the vital function of each nerve of special sense can be excited with no unpleasant results. It has power to stimulate directly the brain, spinal cord, and great sympathetic, and is thus invaluable in the treatment of many forms of central disease.

The faradic current is the current of induction. For its development we need simply a single galvanic cell, to which is attached a helix consisting of wires of varying thickness and length. For a description of the mechanism of this helix and its rheotome I must refer to works on physics. The faradic current works very slightly by reflex action, and has but little power to influence directly either the brain or spinal cord. It undoubtedly reaches the great sympathetic; but it is impossible to localize its effects in any of the ganglia, or to call their special function into action when the nerve is in a measure paralyzed. It does not in any way excite the nerves of special sense unless they are in a state of abnormal irritability, or without the current is of such tension as to endanger the integrity of their normal function.

The impression very generally seems to prevail that there are many kinds of electricity; and this impression is strengthened from the fact that in most of the works on electro-therapeutics, and in almost every published article on the subject, we find adopted a crude and indefinite nomenclature. On the one hand, we hear and read of the primary, the galvanic, the constant, and the continuous currents; on the other, of the secondary, the faradic, the induced, and the interrupted currents. Now we can avoid all this confusion if we recollect that aside from magnetism and static electricity but two forms are manifest, viz., galvanic and faradic electricity. With the first of these the terms primary, constant, and continuous are synonymous; with the second the terms secondary, induced, and interrupted exactly accord. The expressions direct and indirect have been a stone of stumbling to many who have supposed them to refer to the two currents. They merely designate the direction of either current; direct signifying from the center toward the periphery; indirect, from the periphery toward the center.

Speaking of the two currents, the question is frequently asked by both physician and patient, In what do they differ? Is the galvanic stronger than the faradic? These questions are difficult to answer, in a word. It may be said that the galvanic possesses powerful electrolytic properties, is capable of penetrating to the brain and spinal cord, calls into action the vital functions of the nerves of special sense, and affects strongly by reflex action; but under certain conditions the faradic current will do all this. A galvanic current of feeble tension produces slight contraction, and may be hardly felt by the patient; while a faradic current of relative strength may cause pain, and throw the muscle into violent contraction. To the patient the faradic current seems much the more powerful of the two, but the superior potency of the other is readily manifest in the dizziness produced, the flashes of light following excitation of the retina and other resulting phenomena. What then is the essential distinction in the effects of these currents on the body? Experiment and experience lead us to believe it to be mainly of degree rather than a difference in kind, although practically it amounts to the latter. When we come to study the differential indications for the use of the two currents, it is evident that a thorough knowledge of the special physical and physiological advantages of the one over the other will be of service. The advantages of the galvanic over the faradic are these: 1. A greater power of overcoming resistance, by which the central organs are powerfully affected; 2. A power of producing muscular contractions in cases where the faradic fails; 3. A far more potent catalytic, electrotonic, chemical, and thermic action. The advantages of the faradic over the galvanic are these: 1. By virtue of its frequent interruptions it more easily produces muscular contractions when passed over the muscles or nerves that supply them; 2. It produces greater mechanical effect; 3. It is less likely to produce unpleasant or harmful effects when incautiously used than the galvanic.

The general differential indications for the use of the two currents may be thus summed up: the galvanic should be used, first, to act with special electrolytic power on the brain, spinal cord, sympathetic, or any part of the central or peripheral nervous system; second, to produce contractions in paralyzed muscles that fail to respond to the faradic; in electro-surgery, to produce electrolysis or cauterization. The faradic should be used, first, to act mildly on the brain, spinal cord, sympathetic, or any part of the central or peripheral nervous system; second, to excite muscular contractions wherever the muscles are not so much diseased as to be unable to respond to it; third, to produce strong mechanical effects.*

Methods of electrization. There are in medical electricity two principal methods of applying the current, termed respectively localized and general electrization. Under these two heads may be included every variety of application with either the galvanic or faradic currents.

Localized electrization. To Duchenne is due the credit of having at least systematized the method of localizing currents of electricity in special nerves, muscles, and organs of the body. Localized electrization, however, had for years previous to this time been used both in this country and in Europe. Duchenne, keenly alive to the practical importance of the subject, as well as the almost universal neglect under which it had been struggling for place and position, bodied it forth, as it were, into visible shape, and gave it a local habitation and a name. The leading idea of this method of Duchenne was that the electric current can be localized over a fixed point *under* the skin, if well-moistened conductors are strongly pressed *upon* the skin. This conclusion was reached and readily demonstrated by observing that when dry electrodes are applied to the dry skin sparks with a crackling sound are produced, but no sensation and no muscular contraction. If one electrode is moistened, the other remaining dry, contractions with the phenomenon of sensation are excited under the moistened electrode; while if both electrodes are wet muscular contraction and sensation are not only more decided, but more deeply seated. The system of electro-therapeutics and electro-diagnosis which was based on these observations has been refined and developed until it has grown into a permanent department of science.

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* Beard and Rockwell's Medical and Surgical Electricity, pp. 153, 156.

Localized electrization may be thus subdivided: 1. Galvanization or faradization of individual nerves, muscles, and organs of the body; 2. Galvanization of the brain; 3. Galvanization of the sympathetic; 4. Galvanization of the spinal cord; 5. Cutaneous faradization; 6. The electric moxa, with either the galvanic or faradic current.

For the purposes of localized electrization there are needed a variety of electrodes, of different shapes and sizes, adapted to the locality which it is proposed to influence. The method of electrifying individual nerves and muscles must be sought for in chapters on electro-therapeutical anatomy; and the art of readily and effectually electrizing the eye, ear, nose, larynx, œsophagus, heart, lungs, stomach, liver, kidney, spleen, intestines, rectum, bladder, male and female organs of generation, is described in works on medical electricity.

Galvanization of the head. In galvanization of the head one pole may be placed upon the forehead and the other on the occiput, or a pole may be placed on either mastoid process or on either temple. In making these applications it is well to remember, first, that less dizziness is caused when the current flows from the forehead to the occiput, or through the side of the head, than when it is sent from side to side through the mastoid processes; second, that opening and closing the circuit with the positive pole causes less dizziness than with the negative pole. To those who possess apparatus for increasing and decreasing the strength of the current without causing interruptions it is of course immaterial which pole is applied first.

Galvanization of the sympathetic. All ganglia of the sympathetic can be affected more or less by galvanization, but the cervical are most readily and demonstrably influenced by it. One and perhaps the most effectual method of the many employed in galvanization of the cervical ganglia is to place an electrode over the sixth cervical vertebra, while the other is placed in the auriculo-maxillary fossa. It is, however, impossible to exclusively localize the current in the great sympathetic. In the method described the spinal cord is affected, while by other methods the pneumogastric and phrenic nerves are reached as well.

Galvanization of the spine. The spinal cord may be electrized by placing one pole a little below the occiput and the other at the coccyx, or better still, in many cases, by placing an electrode on either side of the transverse processes; one pole being two inches below the other, and gradually moving them along until the coccyx is reached. A less irritating effect is produced by placing the negative pole somewhere in the gluteal region, while the positive is applied to the spine. By this method we put the cord in the so-called condition of anelectrotonos. In using the galvanic current, and especially when the central nervous system is submitted to its influence, it should never for one moment be forgotten that its power for evil as well as for good is very great; and in every application in morbid conditions of these organs the current should be most carefully graduated, and every resulting symptom of its use accurately noted.

Cutaneous faradization, etc. Cutaneous faradization is accomplished by thoroughly drying the skin, and applying the current through dry metallic electrodes or the dry hand, while the electric moxa is produced by applying rapidly to one part a dry and finely-pointed metallic electrode. The first method is extremely useful in conditions of profound cutaneous anæsthesia; the second is frequently employed successfully as a counter-irritant in obstinate cases of neuralgia.

General electrization. The object of general electrization is to influence more or less thoroughly by the electric current the various tissues and organs of the body. The most thorough form of application demands that the whole surface of the body from the head to the feet should be brought in contact with such electrode as may be used in the operation. To effect this it is customary to place the feet of the patient upon a metallic plate, to which the negative pole is attached, while the positive pole is applied to the surface generally. In these operations the faradic current is chiefly employed, although the galvanic may sometimes be used with advantage in those occasional and peculiar cases where the whole nervous system seems to be in a measure insusceptible to any ordinary stimulation.

For a number of years it has been customary with us to substitute our hand for the ordinary sponge electrode, especially when operating about the head and neck. No artificial electrode that can be devised equals the human hand in flexibility and power of adaptation to the inequality of surface in the face and neck, and one needs only to accustom himself to the passage of the current through his hands and fingers to become practically aware of the immense advantage given him in treating all such sensitive parts. Excessively sensitive women will bear and be benefited by this method of treatment, when the application of the same strength of current through any artificial electrode would not be for an instant tolerated. It is hardly necessary to add that the powerful chemical and reflex effects of the galvanic current contra-indicate its use to any extent through the person of the operator.

This method of general electrization, which was first systematized and introduced to the profession five years since by my associate, Dr. Beard, and myself, has now been thoroughly tested, not only by ourselves in a series of more than twelve thousand applications, but by a number of others who have had the patience to persevere in its use. Electricity, and more especially in the form of faradization, is not a mere stimulant, the effects of which pass away as rapidly as they are made manifest. It is a *tonic* of vast and varied powers, and as such is indicated in a large number and great variety of disorders.

Accumulating experience has compelled me to modify and even reject many of the ideas originally held in regard to electro-therapeutical indications; but this main idea of electricity as a tonic I still hold, and every month's experience does but confirm and strengthen my belief. In general electrization, as in other forms and methods of treatment, correct conclusions are reached only by continued and patient observation. He who submits the method to this test will find that its stimulating tonic effects may be divided into three classes: 1. Primary or stimulating effects, or those which are experienced during or immediately after treatment; 2. Secondary or reäctive effects, those which are experienced one or two days subsequent to the treatment; 3. Permanent or tonic effects, those which remain in the system as a permanent result of treatment. The secondary or reäctive effects are not as a rule manifest in the treatment of a robust, healthy person. It is in those cases of nervous exhaustion, and in debility following organic disease, that they are especially noticeable.

From the above very brief and necessarily incomplete description of this method of operation I would by no means have it understood that its effective use requires no careful study nor close preliminary experience. General as well as localized electrization is the property of that physician only who will take the requisite pains to initiate himself into its immediate and remote effects, its indications and rationale, and become practically familiar with its *modus operandi.* It was lack of familiarity with these things that induced medical men for so many years to accord to the study of electro-therapeutics a position no higher than the compounding of a pill or the administration of an enema. This is certainly one of the most remarkable instances of misconception on the part of a great and liberal profession of which we have record.

Paralysis. The utility of some form of electrization in paralysis has long been an accepted fact; and even to within a very short time this disease, or symptom of disease, has been regarded as *par excellence* the condition for which electricity is indicated. Electrization is without doubt *par excellence* the remedy, but if it accomplished nothing more in other disorders it would certainly be undeserving the position we claim for it. In cases of hemiplegia both general and localized faradization and galvanization are frequently of important service. Under one or both of these methods of treatment I have seen the utterance become rapidly more distinct, the strength improved, and the paralyzed limb, which was progressively atrophying, increase in the course of a few months to the size of its fellow. These results, however, are not uniform; and in conditions of extensive central disorganization the utmost care should be exercised in all operations, especially with the galvanic current, about the head and neck. In the case of the late Prof. Geo. T. Elliot the slightest galvanic or faradic influence near the brain or sympathetic caused immediate and alarming dizziness. Post-mortem examination in his case revealed a remarkable condition of fatty degeneration of the cerebral arteries. Facial and other forms of local paralysis, when not dependent on structural change, generally recover with great rapidity. Paraplegia, however, upon whatever cause it may depend, is the most intractable of all forms of paralysis. In these cases, when the cause is of central origin, the faradic current is powerless to produce contraction of muscles, and occasionally no form nor intensity of current is sufficient to disturb their repose. Glosso-laryngeal paralysis is sometimes temporarily benefited by faradization of the pharynx and tongue, thus relieving in some measure the difficulty in deglutition. The disease, however, is almost surely fatal. In lead paralysis the galvanic current is of service, although beneficial results are slowly obtained. Progressive muscular atrophy presents but an unfavorable prognosis under any method of treatment;

but some suggestive results, occurring in our own experience and in that of others, lead us to believe that all cases are not altogether hopeless.

Anæsthesia. Anæsthesia is a symptom dependent on such a variety of causes, both functional and organic, that the results of treatment are necessarily varied. Taking the cases, however, as we find them, without regard to causation, it will be found that in the majority this annoying symptom yields with remarkable readiness to general faradization, or to the electric brush with the same current. Even when structural change is evident in the peripheral nerves or their centers the galvanic current, directed not alone to the benumbed part, but to the seat of trouble as well, not infrequently improves the sensation at once.

Progressive locomotor ataxy. This is a disease for which electrization is invariably indicated. The late Prof. Remak claimed to have cured quite a number of these cases; but in carefully examining accounts of symptoms as detailed by German writers it is evident that many of their diseases termed ataxy do not certainly depend on atrophy of the cord. I have never seen a complete recovery from this disease; but in the thorough treatment of more than a dozen cases by galvanization of the cord, together with general electrization, quite a number have without doubt been arrested in their course; have indeed improved; and in almost every instance some marked and important amelioration of symptoms have been manifest. The severe neuralgic pains seem to be invariably lessened.

As an illustration of what may frequently be accomplished in such conditions I refer to the case of Mr. D. H., aged forty-nine. This patient consulted me some eighteen months since, complaining of persistent numbness of the hands, feet, and ankles; neuralgic pains in the lower extremities; insomnia, with excessive nervousness, together with a very decided lack of coördinating power in the movements of the legs. The first of these abnormal symptoms were noticeable about a year before he fell under my observation, but it was not until four months previously that they began to increase in severity with alarming rapidity. I referred the gentleman to Dr. John T. Metcalfe, who at once confirmed the diagnosis of spinal sclerosis, and highly approved the treatment proposed, viz., spinal galvanization and general faradization. The patient was remarkably insusceptible to the influence of either current in the beginning; but as the treatment progressed increased acuteness of sensibility became decidedly manifest in the hands and feet, while the neuralgic pains were dissipated, and the power of coördinating the movements of the lower extremities markedly improved. Sleep became natural, and several other deranged functions improved with the above changes.

After four months of treatment it was found that further improvement was impossible, in consequence of which the patient was advised to discontinue his efforts at least for a time. The results accomplished, however, were extremely gratifying; and more especially since to this time, more than a year since the last application, all the improvement obtained has been retained.

Neuralgia. If electrization was serviceable in no form of disease other than in neuralgia, the measure of benefit derived from its use in this terrible malady would entitle it to our most earnest consideration. The kind of current to be used, its tension and direction; the mode of application, whether by general or localized faradization, central or peripheral galvanization, galvanization of the sympathetic or the electric brush or moxa; all these considerations require for their elucidation more time and space than this brief presentation commands. In this disease, as decidedly perhaps as in any other, the treatment at the outset should be tentative. By an injudicious application the severity of the pain may be much increased, and not infrequently neuralgia has been produced by overexcitation of the healthy nerve.

As an illustration of the difficulty of laying down special and exact rules in the treatment of this affection, I may refer to a lady patient who suffered excruciating pain along the course of the supra-orbital nerve. In most neuralgias gentle currents tend to soothe, while those of great intensity serve to aggravate, the distress. In this instance a galvanic current from only two cells, and a faradic current at its minimum, greatly aggravated the pain, while a faradic current of such tension as to be absolutely unbearable on the healthy side immediately relieved the neuralgia when applied over the diseased nerve.

Spinal irritation. Spinal neuralgia would seem to be a more suitable term to express the conditions of spinal tenderness, shooting pains, and excessive exhaustion implied by spinal irritation. But, however much ideas may differ as regards the pathology of the so-called spinal irritation, there can be no doubt (among those who are familiar with the varied therapeutical uses of electricity) concerning the great value of the galvanic current in the condition under consideration. The descending current—the negative pole being firmly placed on the gluteal region, while the positive pole is applied as nearly as may be to the seat of tenderness—generally works a favorable change after a few applications. In most cases but five or six ordinary cells should at first be used. Not infrequently a current of even less tension is followed a few hours after treatment by considerable prostration; but in my experience this effect is in a short time almost invariably superseded by increased vigor and relief of pain.

In chorea, epilepsy, rheumatism, gout, and catarrh, the disorders of menstruation, aphonia, and anæmia, the results of treatment by electrization vary with the numberless changing circumstances which accompany and are a part of each individual condition.

Chorea—Epilepsy. In its most aggravated and persistent form chorea is frequently treated with remarkable success.

Galvanization of the brain, sympathetic, spinal cord, and of the affected muscles have all afforded relief; but in my hands general faradization has succeeded best, has indeed been followed by speedy recovery after all methods of electrization and medication had failed. Few, if any, complete recoveries from epilepsy from this method have been recorded. Galvanization of the brain and sympathetic, and even powerful faradization in the region of the sixth cervical vertebra, have, in a number of cases in my experience, been followed by the same degree of amelioration as occurs from the use of bromide of potassium; but in most instances its effects were soon lost.

Rheumatism — Gout. These diseases are without doubt frequently benefited, in a greater or less degree, by electricity. Both conditions are so capricious in their symptoms that it is often impossible to estimate the degree of benefit derived from any remedy. Muscular rheumatism, however, yields in many instances most readily and delightfully to localized faradization.

Amenorrhœa—Dysmenorrhœa. Amenorrhœa is a symptom that yields perhaps more readily to some one of the many forms of electrization than to any or all other methods of treatment. In cases dependent on or associated with general debility general electrization is of course indicated; but where all external efforts have been fruitless internal electrization is not infrequently followed by an immediate and satisfactory flow. As an illustration of this result I give the following:

Mrs. H., aged thirty-nine, had not menstruated for nearly a year. She was not anæmic, neither was her strength much impaired. The uterus was slightly anteverted, but there was no evidence of ulceration or congestion. The most annoying symptom of which she complained, and which had persisted for several months, was a spasmodic contraction of the organs of deglutition whenever she attempted to eat or drink. This condition had increased in severity so that on occasions she was unable to take food sufficient to satisfy the cravings of hunger. For several days I made trial of general faradization, together with localized galvanization, but with no result. With the patient's consent an internal application was then attempted. I introduced a cup-shaped metallic electrode to the uterus, so that the os was completely surrounded, and applied the positive pole firmly against the abdomen immediately above the pubes. The current, which was of considerable strength, I reversed rapidly a number of times during the seance, and on the following day repeated the application. In less than six hours after the second attempt slight signs of returning menstruation were manifest, and steadily increased until, as regards quantity, the flow was quite natural. The patient was immediately relieved of all her distressing spasmodic symptoms, and at the present time (three weeks having elapsed since treatment) still remains free from them.

Dysmenorrhœa of a neuralgic character it is possible at times to benefit speedily; while menorrhagia, which so often depends on a condition of debility and relaxation, is not infrequently relieved by a short course of general electrization.

Catarrh (rhinitis). In connection with the use of the posterior nasal syringe, the galvanic current is most effectual in relieving chronic catarrh of the nasal passages. I speak on this point with much confidence, since I can refer to several cases of catarrh of years' duration that were cured completely and permanently and mainly by localized galvanization. One of these cases to which reference might be made was referred to me by Dr. Roosa, of New York. The patient, a lady aged thirty, had suffered from an aggravated form of the disease for eight years. The symptoms had resisted ordinary methods, but under the treatment described recovery was complete in three months.

Nervous aphonia. This condition is occasionally relieved by external application of either the galvanic or faradic currents, but our main reliance most be in applications directed to the chordæ vocales and surrounding parts.

Disease of the male genital organs. The beneficial results accruing from the use of electrization in certain diseases of the male genital organs would, if time permitted, justify some extended remarks in this connection. In both spermatorrhœa and seminal emissions uniform results are not to be expected, so dependent are they for cause and continuance upon contingencies beyond the physician's control. The reproductive function is so intimately connected with the central nervous system that in many cases of spermatorrhœa, especially when associated with hypochondriasis, galvanization of the brain, spinal cord, or sympathetic exerts a direct beneficial influence. This method, combined with localized faradization and galvanization, is measurably successful. Cases of impairment of sexual power offer even a more uniformly favorable prognosis, so far as electrical treatment is concerned, than the conditions just considered. So encouraging indeed has been the average result that in no case, after ordinary remedies have proved unavailing, should the patient fail to be submitted to the influence of electrization.

Nervous exhaustion. It is in the treatment of the various forms of functional nervous affections, of which excessive debility is the principal symptom, that the tonic influence of general electrization is most decidedly and satisfactorily manifest. Cases of nervous exhaustion are so uniformly relieved by a persistent course of general electrization that when they obstinately resist its influence we have good cause for suspecting the existence of unrecognizable organic disease. Many conditions which are even thus complicated are relieved in their symptoms, although ultimately they may progress to positive disease of the nerve centers.

Nervous dyspepsia. In nervous dyspepsia general electrization is as effective for good as in the above-mentioned condition; and hypochondriasis, both as a symptom of dyspepsia and as a distinct affection, yields in many cases most readily to treatment.

Electrolysis. The limits of this paper will not admit of any extended or very satisfactory discussion of this subject and its application to disease. It is well known that when any fluid containing salts in solution is submitted to the action of the galvanic current certain interesting and uniform results may be observed. Iodide of potassium, which is very readily decomposed, yields at the positive pole iodine and oxygen, and at the negative pole hydrogen and alkali, and the solution is soon changed to the color of iodine. In electrolyzing raw meat we find that oxygen, acids, and albumen go to the positive pole, while hydrogen, alkalies, and coloring matter go to the negative; and in proportion as its watery constituents disappear the meat becomes dry and changed in color, and as the disintegrating process goes on the parts near and between the poles shrivel and harden until they assume the appearance of a charred mass. The law governing this disintegrating or electrolyting process may be thus stated: if chloride of sodium, acetate of lead, and water are electrolyzed, the chlorine, peroxide of lead, oxygen, and hydrogen which are evolved are definite in quantity, and are electro-chemical equivalents of each other; and according to Faraday, who discovered this law, the electrolytic power of a current of electricity is in direct proportion to the absolute quantity of electricity which passes. When we come to test these principles in the treatment of morbid growths and other diseased conditions, it is found that the results are such as to excite much interest even among the most skeptical. That the electrolytic power of the galvanic current is sufficient in many cases to dissipate tumors, both malignant and non-malignant, is beyond question; and that it is able, by reason of its subtile diffusive influence, to destroy more completely and thoroughly the reproductive power of malignant growths than the knife or caustics, can hardly be doubted.

Rapid effects in a case of scirrhus. One of the most remarkable instances of the rapidity with which it is possible, under favorable circumstances, to influence a cancer by electrolysis occurred some months ago in an operation which I performed for Prof. Frank Hamilton in the presence of the medical class of the Bellevue Hospital Medical College. The patient was a woman afflicted with a true scirrhus of the breast, about the size of a small orange, and extending far into the axilla. Two operations, ten days apart, not only relieved the patient of every trace of the intense pain from which she had so long suffered, but entirely dissipated all enlargement of the axillary glands, and reduced the size of the tumor more than one half. Our clinical note-book affords a number of tumors of different character treated with complete success by means of electrolysis, but time will not allow me to give any detailed account of them in this connection.

Erectile tumors. Erectile tumors especially are so uniformly cured by this method, and with no resultant scar or other ill effect, that it is really a pleasure to operate upon them. In the case of a little child about a year old, upon whose face, near the angle of the lower jaw, a tumor of this character had existed from birth, electrolysis was completely successful. The patient was placed under the influence of chloroform, and two platinum needles, insulated to within one third of an inch from the points and connected with the positive pole, were introduced into the two lower quarters of the tumor; while two steel needles, connected with the negative pole and insulated in a similar manner, were thrust into the two upper quarters. The current from twelve medium-sized cells of a zinc-carbon battery was allowed to pass for ten minutes, at the end of which time the coagulation of the blood was complete. Absorption of the clot rapidly became manifest, and in four months it had entirely disappeared. In subsequent operations I have used steel or gold needles at the positive pole, since the oxidation which these metals undergo in all probability tends to accelerate coagulation.

In referring again for one moment to cases of scirrhus

I would remark that where electrolysis, as is sometimes the case, fails to produce any marked impression when its action is confined to the diseased mass, it may be proper to circumscribe the base of the tumor by introducing ten or twelve needles. By this method the current will indeed act upon the muscular tissue beneath, but it is followed by no bad results, while the cancer itself can be made to slough off.

Galvano-cautery. One great objection to the use of the galvano-cautery has been the difficulty of obtaining and managing the necessary apparatus. This difficulty is now being very successfully met, and such apparatus as is needful for most of the purposes of cautery is readily obtained. It has been more or less successfully employed for the removal of tumors, cauterization of ulcers, treatment of fistula, amputation of diseased organs or parts of organs; treatment of neuralgia by cauterization, and so killing the nerve; treatment of prolapsus uteri by cauterizing the vaginal walls with the burners, and thus causing inflammation, suppuration, and cicatricial contraction. In the amputation of such parts as the neck of the uterus, polypus in the throat, etc., that are difficult of access, this method is invaluable. The platinum wire can be accurately adjusted before being heated. There is little pain after the operation, and it saves all hemorrhage. Its use is undoubtedly destined to be greatly extended.

In the foregoing pages I have endeavored to give as compactly as possible some general idea of the distinguishing features of the different forms of electricity, and the very extensive use to which it may be put in the treatment of disease. We claim for it no greater consideration nor higher place than clinical experience justifies. Like other remedies, it has its ardent and indiscreet partisans, but above all other remedies has it been neglected and condemned.

NEW YORK.

PHTHISIS.

AN ADDRESS DELIVERED BEFORE THE KENTUCKY STATE MEDICAL SOCIETY.

BY J. J. SPEED, M. D.

Common civility is much; a common brotherhood is more. The one has prompted us to bid you welcome; the other bids us spread before you our choicest gifts. And while we hold you as brothers gathered for a day under a common roof, it is due to you as to ourselves that the day be made profitable as well as pleasant.

With the view then of contributing my share, infinitesimal it may be, to the value and pleasure of this entertainment, I propose to offer you a running commentary upon the very latest expression of the English mind upon the subject of Phthisis; that singularly delusive malady which blights by a touch the glowing cheek of youth and plants a hectic for its rose, and, while draining drop by drop the life-blood, lulls into a dreamy, hopeful lotus-life the victim of an insidious tuberculosis.

Of comparatively little value are the opinions of ordinary observers when based simply upon what they themselves have seen; but when an educated man of fitting talents has devoted ten years of mature life to the investigation of a given subject his opinions are entitled to earnest consideration, and when this ten is multiplied five times we should weigh very carefully his conclusions before setting them aside as unworthy our acceptance. Dr. Williams, of the Brompton Hospital, is not only this educated and earnest man, but the sphere of his action and his thought is one of the world's great marts, where the highest philosophy has long battled with disease in all its protean shapes. Thus while the country practitioner, with his two cases a year, is on the way toward the truth, and has some dim vision of it; and while the city physician, with his ten cases, is still further on the way, and has some better view; surely neither of them can claim to stand as near and have as clear a vision of the great outline, with its rough points and its delicate shades, as one who stands amid the "central roar of London" and counts his cases by the thousand.

What does this half century of study teach us? I think much, very much. One of the first sentences in the book sounds the key-note to his whole philosophy: "Pulmonary consumption arises from a decline or deficiency of vitality in the natural bioplasm or germinal matter; and this deficiency manifests its effects not only in a general wasting or atrophy of the whole body, but also in a peculiar degradation (chiefly in the lungs and lymphatic system) of portions of this bioplasm into a sluggish, low-lived, yet proliferating matter, which instead of maintaining the nutrition and integrity of the tissues (which is the natural office of the bioplasm) clogs them, and irritates them into a substance which is more or less prone to decay, and eventually involves them also in its own disintegration and destruction. This degraded bioplasm, which I will call phthinoplasm (from 'phthino,' I waste; a wasting or decaying forming material), may be thrown off locally as a result of inflammation, or it may rise more spontaneously in divers points of the bioplasm in its ordinary receptacles, the lymphatic glandular system; and then it commonly appears in the form of miliary tubercles scattered through the adenoid tissue of the lungs."

Thus we have brought before us two distinct classes of causes, the general and the local. The general causes are family predisposition, want of pure air and good food, continued fevers, scarlatina, measles, cessation of discharges, miscarriages, bad confinements, over-lactation, and mental depression. Local causes, originally limited, but ultimately extending to the whole system, are bronchitis, hooping-cough, croup, pleurisy, pneumonia, asthma, trades giving rise to dusty or gritty atmosphere, and injuries.

The origin of tubercle is still involved in great obscurity. It is not held now, as taught by Laennec, to be of spontaneous origin. Burdon, Sanderson, Villemen, and Wilson Fox have established its possible production by inoculation, thus leading toward the idea of infectious origin. The source of infection being some point of irritation, distant, it may be, from the detected tubercle, but finding its way very surely to a nidus suited to its development. Nor is it analogous to the specific growths, like cancer, but "approaches to the common lesions of nutrition, such as pus, lymph, and other hyperplasms." "The lesion originates either in some form of inflammation or in a perverted nutrition of the textures of the lungs, all tending to further degradation and consequent destruction of the parts." Prof. Bennett says tubercle is an exudation, possessing deficient vitality, and may be poured out into all vascular textures in the same manner and by the same mechanism as occurs in inflammation; and, from deficient vital power, exhibits only low and abortive attempts at organization, and more frequently results in disintegration and ulceration."

Virchow regards tubercle as a new growth, having two forms, the cellular and the fibrous, and resulting from inflammation. Fuller, in his broad, philosophic way, says "that while consumption is essentially a constitutional malady, intimately connected with perverted nutrition and imperfect sanguinification, *why* disturbance of the system should tend in certain instances to the production of tubercle is one of the mysteries which we shall probably never unravel." And so on *ad infinitum.* No multiplication of authorities would bring the subject more clearly before you.

How little faith Dr. Williams has in the popular idea that the hereditary taint must influence the development of tubercle is shown by his square assertion of the sufficiency of local causes, even injuries, to their production. It has been, and is to-day, held by many that family predisposition is necessary to give direction to local causes in the setting up of tuberculosis. But Dr. Williams teaches that this condition is often reached without any preëxisting family vitiation, and is "due to the presence of various kinds of phthinoplasm, a withering or decaying modification of the proper plasma or formative material of the body."

Regarding this then as a reasonable stand-point from which to take an outlook over a wide field, and with an eye to preventive measures, and bearing in mind the antagonistic ideas of lowered vitality on the one hand and good building material on the other, decay and nutrition, we should say that whatever influences tend to lower the vitality, degrade the bioplasm, vitiate the healthy, germinal matter, may establish points of departure for a decline which, under the influence of that force which Dr. Williams calls phthinoplasm, is conducted by degrees more or less rapid to that totality known as consumption.

Dr. Williams sketches for us two cases: "A man of middle age is attacked with fever, with pungent heat of body, cough, viscid expectoration, extreme oppression, and overwhelming weakness, resembling that of continued fever, brown tongue, sordes on the teeth, and occasional delirium. The vesicular breath-sound is superseded everywhere by bronchial rhonchi and mixed crepitation. This case might be supposed to be one of universal capillary bronchitis, with general pulmonary congestion. So it is; but this is not all. In spite of remedies the breathing remains short and difficult, the pulse becomes more rapid and feeble, the lips, cheeks, and nails become livid, clammy sweats break out, and the patient dies in the third or fourth week from the attack. The lungs are found congested, and the bronchi loaded with viscid mucus; but more than this, innumerable miliary tubercles are scattered throughout the pulmonary tissue, and these are the obvious cause of the intractability of the case. They break out spontaneously, like the eruption of an exanthem, and by their numbers and bulk induce such an amount of obstruction and congestion in the lungs as to destroy life before there is time for any considerable degeneration or softening to take place. This *acute* tuberculosis is the worst and most rapidly fatal form of consumption.

"The second form of consumption begins with pneumonia. The patient, generally a young subject, is of consumptive family, and may have previously had a cough, and occasionally hæmoptysis. The fever attendant on the inflammation may not be very high at first, and the expectoration by no means so viscid and rusty, nor the crepitation so fine and even, as in simple inflammation of the lungs; but the symptoms are more persistent. The pulse and respiration remain frequent. The heat of the body, particularly the chest, continues remarkably high, almost burning the ear as you examine the back. But this intense heat is alternated with occasional chills and profuse night-sweats. The cough is distressing, and the expectoration opaque, purulent, and clotty. The flesh wastes and the strength ebbs away. The appetite does not return, and the progress of consumption and decay is rapid. Auscultation reveals the steps of the destructive process. The affected part, one side or both, becomes dull on percussion, only varied with the cracked-pot note from the gurgling within. The loud tubular sounds are replaced by coarse crepitation, and the diffused bronchophony is modified into detached islands of voice, loud and pectoriloquous, or into the snuffling or whispering sounds equally characteristic of cavity. This form of *galloping consumption* may also prove fatal in a few weeks. The lungs are found in a state of consolidation little more dense than the hepatization of pneumonia, but their red is mottled with gray and yellow patches of tuberculous or aplastic matter, and excavated into numerous small cavities communicating with the bronchial tubes, and containing more or less of the compound matter which was expectorated during life, consisting of mucus, pus, degenerating epithelium, and exudation matter, with disintegrated fragments of lung tissue. When not too extensive, this form of acute phthisis may be arrested and brought to a chronic state; and the chance of this result will very much depend on the recovery of appetite, and the power of the stomach to bear strong nutriment, tonics, and, above all, cod-liver oil."

These are graphic, telling pictures, and may well startle, like a vision of doom, the victim and his medical adviser. But in a large majority of cases the blow is not so overwhelming, the destructive process is less active, the progress is less rapid, and we have time and means to resist its inroads and fortify the system against its operation. How fortify?

Just here Dr. Williams passes in review almost all the conditions of man's being: food, air, light, temperature, clothing, exercise, mental and moral states; teaching clearly and well what we ought to do and ought to be.

Perhaps to us, who are a well-fed and reasonably well-cared-for people, the most important prophylaxis may be drawn from a higher regard for proper clothing, and a better control over the passions, all of them.

The physical exposures of our women and of our children, in a climate characterized by frequent and abrupt transitions, is in such utter violation of all laws of physiology that the medical man stands amazed in the presence of the monstrous folly; amazed and powerless, for he is driven from the field of his own thought-work by an inexorable and relentless tyrant; a tyrant whose edict reads "nakedness" instead of "clothing," "exposure" instead of "protection."

To the bright girl of sixteen the doctor's suggestion comes, like the idle wind, unheeded. It is the morbid whim of an old fogy, who has had his day and forgotten the follies of his own life, and she promptly puts his counsel aside. To the same pale girl at seventeen that suggestion has become a grave question, which will not be put aside, for the idle wind has dried up the very fountains of her being; and the low-necked dress of last winter, which exposed such rounded shoulders and such beautiful charms, is pieced out this winter to hide the skeleton form which tripped lightly away from the doctor and bowed so readily before the tyrant fashion.

If women could only be made to understand the meaning of the word *protection:* that it involves the idea of substantial underwear, thick-soled shoes, and reasonable party hours, the death-rate would be sensibly and constantly diminished. But there are some subjects upon which it is only a waste of paper to write, and this is one of them. The fatal characteristic of Ephraim seems to have descended to fashionable women. They are joined to their idol, and demand to be let alone. But with authorized emphasis I tell you you can not with impunity violate the law which nature has stamped upon human organization. The physical as well as the moral law has its "thou shalt and thou shalt not." Detectives are on your track; your offense will be discovered, judgment will go against you, and your punishment secured. Nor are these arbitrary laws; they are organic, incorporated in the constitution itself, with no provision for their repeal. You must obey them or pay the penalty of their infraction. Fable it may be that the hounds of Acteon did turn upon and rend him for his discovery of Diana naked; but the Nemesis which waits upon violated law is not a fable, and the delicate textures of your transcendent beauty will very surely be rent and torn and bled to pallid whiteness by this inexorable power.

And then that other question of the passions—wide-spread in their operation and overwhelming in their power. What shall we say of the passions, the great Moloch-fires which consume by inches what they fail to blast by a touch? With the voice of a trumpet let the watchman on the walls say this, that phthinoplasm is the attentive handmaid, ever ready, following closely in the wake of passion; that the powers which are weakened by the mistress are rapidly wasted by the servant; that the race is swift and short, and the prize is always lost. Intemperance in all its phases is the foe to human health. Equipoise in all his functions and all his powers is health, and constitutes in man the *mens sano in corpore sana.* The stimulation which prompts the undue use of any power is followed by reäction. There must come the backward swing of the pendulum. "Your good cedar bow," said the Egyptian hermit to his brother, "seems well made and strong; is it elastic too?" In pride the brother drew its tense cord. "Draw harder; harder still." "Nay," said the brother, "it may break; the best bow of the best cedar may be broken." *There's your lesson.* Remember the backward swing of the pendulum; remember the bow of the hermit, and live within the law of life.

The many interests demanding attention before this convention forbid an elaborate discussion of any of them; but there are two or three points of lay as well as professional interest which require a word.

Climate. Where shall we go? is a question constantly put by the consumptive to the physician—one which taxes the judgment of practitioners, and has received a full share of attention from all writers upon this world-scourge. To my mind it has never been satisfactorily answered. Patients have been sent everywhere—North, South, East, West—on the land and on the seas; some with benefit, and some with injury. In one it seems to prolong life; in another to hasten the progress of disease. Whatever may be the underlying theory, this has been the fact touching all peoples throughout all medical history, and yet the popular mind clings with strong tenacity to the hope of life in some other climate. Climate alone is not enough, and is not all you get by change. For my own part I hesitate long before advising a patient to everything involved in the idea of a change of climate. It involves too much of certain loss for a possible but uncertain gain.

There is another question, bearing upon which Dr. Williams gives us three or four cases with rather unsatisfactory results. What is the influence of pregnancy upon the progress of consumption? Its influence, in my judgment, is accounted for by that philosophy which teaches the existence in organic nature of two forces: the one presiding over growth, development; the other over disintegration, decay. This state is one of nature's beautiful adaptations. During pregnancy she directs her energies to the development of a new being, and holds in abeyance for the time all opposing forces. This development completed and the product thrown off, the latent antagonistic forces resume their march, hastened often in that march by reason of the draft which has just now weakened the powers against which they battle. The resistance is lessened, and the victory is easier than before. This, however, is not always so. The wonder-working power of nature is shown in this, that while her forces are engaged in building up a new being, she sometimes spends her surplus energy in repairing breaches in the old.

Air. To the physician or the patient it would seem that the most superficial view of this terrible malady ought to suggest the absolute necessity for pure air, and yet constant experience shows how little its importance is regarded. The very organs whose business it is to elaborate for us vitalized blood, delicate in their structure and delicate in their manipulation of the elements supplying their chambers, these organs, upon whose accuracy so much depends, are furnished with an air loaded with impurities, poisoned before it reaches the already overtaxed and weakened tissues. Sweet waters do not flow from bitter fountains. Breathe pure air. I do n't mean air free from all the impurities and offensive odors of the earth. I do n't demand that. Then what? What is pure air? Air which has not been used; air with oxygen in it; air let in from out of doors; not the reïnspired and reëxpired air which is loaded to deadly repletion with every possible emanation from the bodies of patient, nurse, and friend in a single chamber. That is poison. Not that, but air from out of doors, air laden with life, air with healing on its wings.

Food. What may we eat? Here we tread upon ticklish ground, controverted ground; a large field too this question of "food for the invalid;" too large certainly to be fenced in by a single paragraph, and yet what else is left in a short convention paper? With an eye then still fixed upon the antagonistic forces of decay and growth, of tearing down and building up, we should say meat and bread and milk and butter and eggs and vegetables and fruits, everything which goes to nutrition (for this is the central idea in the management of phthisis), eschewing sedulously the confections and trash which belong to the category of sweetmeats.

But you ask what meats, what bread, what fruits, and what vegetables? These are questions which each can answer for himself better than I can answer for him. I have had occasion elsewhere to say that the patient's stomach is worth more than the doctor's brains. Put *that* fairly, honestly to the test, and it will tell you better than I can what material it needs. The caution I should impose touches *quantity.* Eat wholesome food at will, but not *ad libitum.* The body must be sustained, but not overfed. The general government must be supported, but not by oppressive taxation. Do n't lay too heavy a burden upon your best friend. Deal kindly, generously, fairly, and your revenue is certain.

But you are ready to ask, What now is the net purport and upshot of all the latest teaching upon this subject? Is consumption curable? The trumpet here gives no uncertain sound. Yes, unquestionably yes. The voices of pathologists over all the earth unite in answering yes. By what means? Here again the answer is emphatic. Guard well and persistently all the hygienic influences which surround you; your food, your air, your light, your exercise, your rest, your temperature, your spirits; everything which contributes to the formation and preservation of your life, material which sustains the bioplasm, which goes to the building up of human organization. These are your personal surroundings, and largely under your personal control. Secure all this, and as a part of your living use cod-liver oil. This Dr. Williams emphasizes as "the remedy." Use it not simply for a week or a month. Remember you are fighting for your life. Let the battle be for life. You buy it cheap enough at that. Indeed you can buy it in no other way. It won't do to put out the visible flame and leave the live coals to smoulder under ashes. The idle wind which first swept by you all unheeded, and after chilled your life currents, has not ceased its goings; and in some unguarded moment may come again to you, sweeping away the cold ashes and fanning into a fiercer flame the old fires. Eternal vigilance is the price of life to you. And this vigilance must be under enlightened direction. Do not imagine that you know more than your doctor. When you are far out at sea and the storms come, threatening disaster to your cherished hopes, do you throw your pilot overboard and seize the wheel with your unpracticed hand, in hope of better guidance? This is convulsion, not common sense; it is insanity, not judgment; it is irrevocable doom! No. Systematic, educated effort is worth more to you than your spasmodic struggles, struggles which belong to the paralysis of fear. Catching at straws, do you say? Yes verily, catching at straws. But what do you want with the straw? You are on the ship yet, and your pilot is still there with his trained eye and ear and hand, and his self-poise. Stand by your pilot. Remember this is your first experience upon stormy waters. Your educated pilot has carried safely many a cargo as rich over many a sea as stormy as this which so unnerves and frightens you. Stand by your pilot.

One word about the oils. Twenty odd years ago the medical mind of Europe and of this country was possessed with the idea that "cod-liver oil" was the means by which the world was to be rid of one of the *opprobria medici*, and chemical science was called in aid of practical medicine to secure the purest and least offensive preparation of that particular oil. With great rapidity it rose in public estimation, and for a quarter of a century now has been acknowledged as the remedy for phthisis. But presently a question arose. Being used over all the earth, wherever civilization has furnished a tolerably enlightened medical corps, and a favorable result coming from every quarter, a voice clear and distinct from the millions, answering back, Yes, this is the remedy—the question, I say, arose, Is all this due to cod-liver oil? Do the waters furnish cod-livers enough for oil to cure all the earth? Possibly not. If not, then may not these uniform results be due to some principle belonging to oils, and not to any specific principle belonging to cod-liver oil? The drift of the answer to this question is toward the affirmative, and points to the idea of nutrition furnished, and not to any specific medicinal power. I believe that to this complexion must it come at last.

Let us not be arrogant, gentlemen. There are very few lines of thought upon which the human mind has traveled back and up to the essential nature of things, the ultimate. The incisive, searching brain of France, as represented by Laennec and Louis and Broussais and Audral, and the patient, delving brain of Germany, represented by Rokitansky and Virchow and Niemeyer, have struggled with untiring energy toward the hidden secret, and each has had his Eureka-shout. The broad, strong, tenacious brain of Britain has sought for and philosophized over the probable till the names of Bennett and Addison and Forbes and Pollock and Fuller and Williams are familiar to us as household words. The practical-tact brain of America, in a spirit of careful and judicious eclectism, has drawn from these vast treasure-houses whatever of value it could use; and at the bedside has proven that, whether tubercle in its essence be this or that, we can cure tuberculosis. Broad and deep and strong are the foundations laid by those earnest Old-world investigators. Grand in design and magnificent in proportions is the temple which the scientific architects have reared to Hygeia; but, strong and grand and beautiful as it is, the crowning glory of the structure is its practical value. I believe that American doctors lead the world in their practical knowledge of its uses.

One of the old Scandinavian myths represents the young warrior as furbishing to its utmost brightness a shield which he hangs upon the ancestral walls to reflect for those at home the heroic deeds of his life. Wherever he may be, his conviction is firm that every brave, good deed will shine out from that polished shield, faithfully reproduced for those who love him. For you, gentleman, the private chamber of cottage and mansion, in city and country, in hill and valley, over all the land, holds a shield which tells all the goodness, all the strength, all the gentleness you show in this life-battle. The grateful heart of the strong man whom you rescued, the warm heart of the gentle woman whose life you saved, is a brighter and surer mirror of your virtues than the shield of the Scandinavian youth. Let us see to it that this mirror reflects nothing but virtue, patience, courage, and all noble doing.

LABOR COMPLICATED WITH PERITONEAL ADHESIONS OF THE UTERUS.

BY G. W. H. KEMPER, M. D.

Mrs. M., of delicate stature, age about nineteen, primipara, had false labor-pains most of the time during the days and corresponding nights of the 31st of January and 1st of February, 1872, which were finally quieted by morphia at midnight of the last date mentioned. At eleven o'clock A. M., February 2d, while free from pains, the membranes ruptured and the waters drained away. Labor began at once, and I was summoned. At noon I found the pains regular and quite frequent, and of an expulsive character. By the touch I could distinguish the fetal head through the uterine parietes, but could not discover the os uteri. The pains continued to increase in force, frequency, and duration. At three P. M. I found the condition of the parts unchanged. I now introduced my middle finger into the vagina and swept around the pelvic walls until I found the os, which barely admitted my finger-tip, high up, and pointing directly toward the left side of the pelvis. I hooked my finger into the os, and gently and steadily drew it downward toward the vaginal outlet.

The dilatation now proceeded rapidly, and in one hour the first stage of labor was completed. The vertex was to the left acetabulum. The pains increased in force, and the head was soon driven down against the perineum, which yielded slowly. The *right side* of the os protruded outside of the vulval orifice, even with the right labium, nor could I compel it to retract. The *left side* of the os was beyond my reach. I mention this condition to show the obliquity of the uterus, which the reader is requested to bear in mind, in connection also with some other facts to be mentioned, as well as the locality where I discovered the os.

Gradually the soft parts dilated, and at 7:20 P. M. the head was born. The pains now were quite feeble, and in spite of all my efforts the shoulders did not follow for about ten minutes. The child, a male, afterward ascertained to weigh ten pounds, presented no evidence of life; nevertheless I resorted to the usual means used for resuscitation for several minutes to no purpose. I now gave my attention to the mother.

Upon examining the uterus through the abdominal parietes I found the circular fibers alone contracting and embracing the placenta. The fundus of the uterus extended upward and to the right side, reaching nearly to the diaphragm. I could distinctly trace the outline of the placenta, situated about the middle of the uterus, while the fundus was clearly pointed. I was unable to push the uterus toward the median line. I maintained steady and firm pressure over the uterus, and at the same time made gentle traction upon the cord.

In thirty minutes from the birth of the child the placenta was expelled. I now hoped the uterus would assume the usual globular form; but it only became more cylindrical in shape, while the fundus remained at the point above described. I was still unable to push it toward the median line. The fundus was evidently fixed to some object. Fearing hemorrhage from such irregular contraction, I gave ergot, and continued manual pressure upon the uterus for one hour, during which time considerable but not an excessive amount of blood was lost. I then applied a binder firmly, and remained near my patient for two hours longer, and at my departure I found the position and shape of the uterus unchanged.

During the next day (3d) Mrs. M. informed me that "something had given way in her right side under her ribs." Upon examination I found the uterus readily movable in the abdominal cavity, so that I could easily push it to either side. It did not extend as high up as yesterday, yet much higher than is usual, and the shape still cylindriform. She had occasional excessive sweatings, and considerable nervous excitability, that necessitated my attendance for several days; and I repeatedly noted the changes of the uterus from one to the other side until it became reduced in size.

At a meeting of the Obstetrical Society of London, 1869, Dr. Graily Hewitt read a paper upon "Peritoneal Adhesions of the Gravid Uterus a cause of Post-partum Hemorrhage," an abstract of which will be found in the Half-yearly Abstract, Vol. L., page 244; and also a notice of the same in a review of the transactions of said Society in the American Journal of Medical Sciences for October, 1870, page 491. Dr. Hewitt states that, so far as he is aware, this subject has not been treated of by obstetric writers. He narrates several cases, one fatal, where the autopsy revealed "firm, tough broken-off adhesions at the top and back part of the uterus, giving it quite a shaggy aspect."

In the discussion which followed the reading of this paper the theory advanced by Dr. H. was assailed by most of the speakers as not being the correct one. I am not aware that anything has been written before upon this subject in this country, and a desire to help elucidate facts (if my diagnosis has been correct) has prompted this article.

The more salient points of diagnosis in this case are possibly not of much value when taken singly; but are, to my mind, conclusive when taken collectively:

1. More or less constant pain in right side under ribs.

2. Detention of the shoulders at the outlet, probably from deficient contraction of the fundus.

3. The obliquity of the uterus before and its peculiar shape after the birth of the child; the fundus reaching so high, to the right, and immovable. Also the tardy expulsion of the placenta.

4. The sensation experienced by the patient of something giving way the next day after labor, followed by marked mobility of the uterus.

Muncie, Ind.

Reviews.

Boylston Prize Essay: Recent Advances in the Pathology and Treatment of Diseases of the Skin. By B. JOY JEFFRIES, M. D. Boston: Alexander Moore. 1871.

Dermatology has been for some years a most fruitful source of medical literature; and from the swarm of publications devoted to this subject Dr. Jeffries has essayed to eliminate and bring together, in a concise thesis, the recent advances in the pathology and treatment of diseases of the skin. That the author has produced a work worthy of reward would seem proved by his having received the prize at the hands of the Boylston Medical Committee, composed, as it is, of gentlemen learned and able in the profession.

The first portion of the essay is chiefly occupied in a "free showing of the dermatological hand," as he expresses it; and the arts, tricks, and follies of the charlatans are exposed and commented upon without mercy, and, it must be confessed, with great justice. The greater part of the vast mass of the literature on this specialty thrown off from the press recently, says Dr. Jeffries, is worse than Hebrew to any but the professed dermatologists, and of but little or no service to them. He further declares that the more a practitioner studies almost any of these publications the more he becomes lost, mystified, and the sooner disgusted, unfortunately not with the author, but with dermatology. We agree heartily with the essayist that "there has been plenty of motive but little necessity for a great deal of dermatological literature. A book or a monograph is soon patched up, the more unintelligible and the less clear and concise the better, and through it a reputation is soon gained; for cutaneous medicine is so little understood in the profession at large that a book means an author, and the idea of an author means a knowledge of the subject. The more *outré* the thoughts the more learned does the writer naturally seem, particularly if a little of other peoples' original ideas are ingeniously interwoven, so as to appear striking and new." "Recognizing this as one of the curses of medicine at large," he says, "we must confess that it does seem as if unfortunate dermatology had to bear more than its fair share of pretenders' efforts in all three of the principal languages." Of dermatology itself Dr. Jeffries speaks as candidly and justly as he does of dermatographers. Dermatology is at present, he declares, in a sort of "nomenclature condition;" and is likely to continue for some time to the majority of medical men an unintelligible and unmeaning classification, and a more or less heathenish nomenclature. He thinks the time has not yet arrived for a classification of cutaneous diseases; that we have not a sufficiently profound and exact knowledge of the pathology and therapeutics of the subject to enable us to make a sound and lasting classification. Nor does he recognize the necessity for any classification in the study and practice of dermatology. Some general order for bringing cutaneous diseases before his class is, he admits, necessary for a teacher; but "the less the student hears of the special order or classification, and the more of the particular disease, its symptoms and treatment, the better for him."

Dermatology, he avers, is comparatively a simple specialty; and this, in our judgment, is very true, were it not for the heathenish, elaborate, contradictory, and unsettled nomenclature, and the mass of trash copied from one book into another, mingled with our very limited capital of established therapeutical and pathological facts.

Dr. Jeffries thinks that the American dermatologist who has studied in the continental schools is often disappointed to find, in prescribing the same remedies in the manner he saw done with good results on the other side of the water, that he does not meet with like success. We are inclined to the opinion that the cure of patients in the continental hospitals is, generally speaking, a very minor consideration; and we have an impression that hospitals are considered by continental medical men rather as laboratories for scientific experiment than as institutions for the care and relief of the indigent sick. Practice, however, as seen and taught in the hospitals of Great Britain, is, according to our experience, applicable to the same class of persons in other countries.

The author wisely insists on the importance of plates being attached to works on cutaneous diseases; also that dermatology can not be successfully taught without the diseases themselves, or their portraits or colored casts, "which for lecturing are even better than the patients themselves." Dermatology can not be learned from books alone; nor, in truth, can any other branch of medicine. Sydenham advised his young friend, who asked in what book he would recommend him to commence his medical studies, to read Don Quixote. From what Dr. Jeffries says of dermatology and dermatographers, we suspect he would advise the student who might ask him what work on skin diseases to study first to begin with Mark Twain or Artemus Ward; and we are not sure that he would be very injudicious in the advice.

Dr. Jeffries believes in Hebra. The French works, he says, "are unsatisfactory, and almost without value for reference." For Wilson he professes the greatest respect as a "dermatologist of vast experience, and as a man of independent thought and acute observation;" but charges him with having "incalculably hurt dermatology by his individual idiosyncrasy for multiplying and altering dermatological nomenclature, and changing established modes of spelling."

For the labor bestowed upon this essay the author deserves much praise. He gives a list of one hundred and twenty-one bibliographical references, dating from the year 1814 to 1871. In many instances the views of authors are compendiously given; in others, merely the titles and character of works are mentioned. In pathology he is elaborate, recording the latest discoveries and theories, and giving both sides of disputed questions. Upon the subject of treatment he is not, we think, altogether so satisfactory.

In point of style, he is not invariably as lucid as the importance of his topic demands. For instance, he says "specific inflammation of the mucous membrane of the generative organs produces no cutaneous disease; the chancre-sore also is not followed by eruptions, but *constitutional syphilis imitates*, on the common integument of the body, almost *every other affection* this organ is subject to, even the results of the presence of animal and vegetable parasites."

The exanthems, small-pox, measles, and scarlet fever he considers as belonging to general medicine. He declares—and we concur with him—that pitting does not occur in more than half the cases of variola, and that when the pustules are deep-seated no treatment prevents pitting. Psoriasis he speaks of as incurable, and considers its cause undetermined. Recent experience has convinced us that it is connected with the strumous diathesis, and is curable by cod-liver oil and iodide of iron, assisted, of course, by proper local treatment. He mentions ergot of maize as having proved beneficial in psoriasis; but apparently it acts by depressing the general health, and is most probably merely temporary in its effects, as are purgation and starvation.

Ichthyosis is considered incurable, though palliatives are recommended. Like psoriasis, we deem this a scrofulous affection, and have had cases to yield to the same internal treatment, assisted by inunctions of cod-liver oil and glycerine and by vapor-baths. Eczema he attributes to many causes, local and constitutional, hereditary and acquired. Treatment depends upon its stage and cause, and may be local or constitutional. Stimulants and lenitives, dry powders and bandages, and exclusion of air by impervious cloths, are all valuable remedies. Impetigo is held to be merely a consequence of eczema, except when due to burns, scalds, cutaneous poisons, etc. Doubtless such is the usual source of impetigo, but cases have come under our observation which were clearly independent of any of these causes. Contagious impetigo, described by Fox and recognized by Allbut and Anderson, he does not admit as yet proved to exist. Ecthyma, he thinks, is not a distinct disease, but merely a phase of some constitutional affection in which the skin exhibits ecthymatous bullæ or pustules. Rupia, he agrees with Hebra, is always syphilitic. In both propositions we heartily concur. Pemphigus bullæ contain, according to Dr. Jeffries, "first serum, then pus, or sometimes blood." Most certainly pus is not a usual condition in pemphigus. Quinine, he states, has power to check the fever preceding this eruption, and even the eruption itself. Prurigo, he says, "is a fearful and incurable disease, fortunately not common." Pruritus is its terrible symptom. It consists of papules, and occurs about the roots of hairs. We have had sometimes good results from the bromides internally in cases of true prurigo, though not exactly the disease described by Hebra. In a case in an adult, apparently due to severe spinal injury, we found no treatment of any service.

As to the pathology and treatment of urticaria, he thinks "but little advance has been made in this most singular of skin diseases." He has but little to say of its treatment. In this locality we find urticaria, with rare exceptions, clearly due to malarial poisoning, and more or less intermittent, or to improper aliment or digestive aberration. Quinine, antacids, emetics, and purgatives usually relieve it promptly. Herpes zoster, according to Dr. Jeffries, "still remains a game we do not understand." The bromides have acted well in this affection in our hands. Herpes progenialis, he declares, is in no way connected with venereal disease; sometimes is periodical. No means are known to us of preventing it. Irritants should never be employed in its treatment. During the past year we have seen many cases, most of which were due to acidity of stomach and some to malaria, and were cured by bicarbonate of soda and other antacids internally; astringents and ablutions locally facilitating the cure.

Acne disseminata we can not consent to consider "the bane of dermatologists," as Dr. Jeffries terms it. We deem it one of the most certainly remediable of cutaneous maladies. Careful, frequent, and prolonged warm baths, assisted by the flesh-brush, severe friction, and such other means as shall remove the sebaceous deposits, with stimulants sometimes and sometimes astringents locally, arsenic internally, and attention to general health or functional disturbance, as the case may demand, will very certainly yield satisfactory results. Great attention to the skin may be required for a long time, but it is doubtful if any case is incurable. Similar treatment of acne mentagra, assisted by carbolic acid, we find equally satisfactory. For acne rosacea "incision of the eruptions is recommended, and touching with tincture of perchloride of iron." Removing the cause, treating the general health, if called for, using astringents, or touching with nitric acid, we consider better treatment. Anthrax and furuncle Dr. Jeffries treats alike by incision. Quinine and iron internally, and carbolic acid externally, we are confident would yield him better results. Malignant pustule, he says, "needs the knife and caustic at once." Such procedure we hold to be not only unphilosophical, but injudicious. Certainly it is no local disease. We have observed the best results from iron and quinine internally, and lenitives and anodynes to the pustules. Alopecia, he states, both general and areata, may be produced by arsenic. Sudden blanching or partial loss of color in the hair has been found to be "due to the presence of air in the medulla, and sometimes in the cortical portion."

Of the vegetable parasites of the skin Dr. Jeffries mentions favus, herpes tonsurans, pityriasis versicolor, sycosis, eczema marginatum, and one in the nails, as being generally recognized. Wilson and his "imitators," as he calls all who agree with the great English dermatologist, deny *in toto* the existence of these parasites. Hebra, Hallier, Peck, and Köebner hold that all the parasitic diseases are due to the same growth.

Carbolic acid internally for diseases of the skin, in doses of six to nine grains daily, reduces hyperæmia, diminishes the quantity of epidermis formed, and acts upon the peripheral nerves in such a way as to overcome the itching. These are results recorded by Kohn and Newman, as seen in Hebra's wards, Dr. Jeffries tells us.

We have not noticed all the affections treated of by Dr. Jeffries, but have called attention to those portions of his work which seem to us of the highest value. It is a work well worthy of perusal, and we commend it both to the dermatologist and general practitioner. L. P. Y., JR.

The Endoscope: Considered particularly in reference to Diseases of the Female Urethra and Bladder. By ROBT. NEWMAN, M. D., New York. From the Transactions of the Medical Society of New York. Albany, 1872.

We believe we echo the voice of a large number of the profession in saying that diseases of the female urethra and bladder are almost totally neglected in works on maladies of women; and yet these diseases are numerous enough, serious enough, often difficult to diagnose, and the therapeutics often still more difficult and uncertain, to justify their fullest consideration. Indeed we know of no special treatise more needed just now than one devoted to such disorders, and he who meets this want will reap a harvest of usefulness, if not of fame as well.

Dr. Newman's monograph is an admirable contribution to our knowledge as to the diagnosis and therapeutics of some of these diseases. The author describes the endoscope, Desormeaux's he prefers, and the accessory instruments, the descriptions being assisted by excellent illustrations. He then gives clinical reports of cases he has had under treatment, very good chromo-lithographs accompanying these reports. Those who know Dr. Newman will bear willing testimony to his ability, and to the fidelity with which he has worked out some most important problems in diagnosis and therapeutics.

T. P.

Small-pox: The Predisposing Conditions and their Prevention. By DR. CARL BOTH. Boston, 1872.

An eminent Dublin prelate, now no more, held that salt was not necessary for human beings, and that the taste for it was artificial; but Dr. Both asserts "that the proper use of salt is the scientific and most certain preventive of small-pox;" that Boston is comparatively free from the scourge because the inhabitants use so much salt, etc. In a word, let the old adage, "An ounce of prevention," etc., be changed into, an ounce of salt is worth a pound of vaccination. Salt is to be the savior of the world—from variola. Salt, the most certain preventive of small-pox, and saliva,* the appropriate application for wounds, are the great medical discoveries of the hour!

T. P.

* Dr. F. P. Henry (Medical Times, April 1, 1872) states that saliva is nature's lotion for wounds, ulcers, or contusions; that the child who cuts or bruises his finger puts it in his mouth; that adults in similar cases do likewise — how admirably the fable as to man's first learning to eat oysters would come in as an illustration!—that the inferior animals manifest faith in saliva, for they lick their sores; and that a fluid resembling saliva could be readily made artificially, etc. We judge the writer in earnest, though he does proclaim his views on the 1st of April. It is hardly necessary to remind our readers that in one case recorded in sacred history, where dogs licked the sores of a human being, the patient died, whether *post hoc* or *propter hoc* we are not informed; and that the use of saliva in some inflammations is a good deal older than the Christian era.

Clinic of the Month.

Epidermic Grafting.—Mr. Anderson* objects to the title of "skin-grafting" as not strictly accurate, and liable to lead to deceptive views both as to the pathology and the results of the process.

The objects of epidermic grafting are, first, to procure the cicatrization of a granulating surface where the natural processes of repair appear to be insufficient or more or less exhausted; second, to hasten the healing of an indolent ulcer; third, in the case of any active and healthy granulating surface merely with a view to increase the natural rapidity of cure, and abbreviate the usual period of treatment as much as possible; and fourth, to diminish cicatricial contraction and consequent deformity, the presence of a number of islands of repair tending to lessen the traction upon the adjacent healthy skin.

"The processes to which the name of skin-grafting has been applied have a rather wide range. Large portions of the entire thickness of the skin have been successfully transplanted, and new centers of growth have been initiated from almost invisible segments of integument, from mere scrapings of epiderm, and even from free epithelial cells contained in the serum of a blister. The smaller portions have been engrafted by simple superposition, by being forcibly thrust into the granulations, and by implantation into incisions made for their reception. The site chosen for the operation has hitherto been an area of granulations; but there is little doubt that the grafts could be made to take root on a freshly-exposed surface. The grafts may be taken from the patient himself or from another person. A recently-amputated limb too has been found to yield serviceable material; and we may hence assume that skin removed from a body within a certain period of death would be available. Where it is determined, however, to obtain the required portion of integument from a foreign source, it will be well to bear in mind the possibility, alluded to by Dr. Gull, that certain morbid conditions may thus be inoculated.

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*St. Thomas's Hospital Reports, Vol. II.; London, 1871.

"The uncertainty in the results of the treatment is greater than can well be accounted for by individual differences in the constitution and age of the patient, and in the character and condition of the granulating surface under notice. In order to ascertain how far the issue is influenced by external circumstances, I have made a series of experiments which have led me to believe that ill success, in a considerable number of instances, depends almost entirely upon the method of operation adopted and the subsequent dressing. Ulcers of large size were selected, and upon each were grafted portions of skin in definite situations and order, an accurate tracing showing the outline of the margin of the sore. The position of the transplantations was then taken, and daily observations of progress could be made with the greatest exactitude. The grafts were in certain parts merely laid upon the granulations, in other situations forcibly imbedded, and in others inserted into small incisions about one sixth of an inch in depth. In other cases the grafts consisted of portions of the horny layer of the epidermis, separated by vesication or by scraping; portions involving part of the rete mucosum, but not containing any of the papillary structure; portions including the papillæ, but not the entire thickness of the cutis vera; and lastly, segments of the skin in the whole depth. In other instances, and in like manner, were tried pieces of different sizes, ranging from the dimensions of a small pin's head to those of a split pea; lastly, comparisons were instituted between the activity of grafts taken from the subject of operation and those from strangers. The first dressings, in some instances, consisted of ordinary strapping applied to keep the grafts in position, and covered with lint; in others, of strips of linen dipped into water, evaporation being prevented by the use of oiled silk.

"Instead of transcribing the lengthy details of the individual experiments, I propose to convey as briefly as possible the practical deductions I have drawn from the results obtained.

"1. *As to the mode of applying the grafts.* In a few cases all the plans succeeded; and here it was noticeable that the surface grafts usually showed signs of extension some days in advance of those implanted, often as early as the third day, and maintained the advantage thus gained throughout; but on the average more than one half of the superposed segments failed to take root, and in some cases all were displaced by pus formation. The majority of those forced into the granulations became surrounded with little areæ of suppuration, and were destroyed. On the other hand, nearly all the pieces inserted into the incisions became adherent. In these cases unmistakable signs of vitality were generally visible on about the seventh or eighth day, but sometimes much later; on one occasion no evidence of existence being manifested until the end of the third week after transplantation. In this instance the sore, which was situated on a varicose and greatly enlarged limb, took an unhealthy action upon the day following the operation. All the surface grafts were swept away, and it was supposed that the implanted pieces had shared the same fate; but at the period mentioned, the granulations in the mean time having reässumed a healthy aspect, areas of cicatrizations unexpectedly appeared in the situations of five out of the eight buried grafts. A similar peculiarity has been observed in two cases now in the hospital.

"2. *As to the depth of integument required.* More than one half of the grafts, which included the whole thickness of the skin, acted well when imbedded in incisions, but those laid upon the surface were much less successful. Where the segment consisted of the cuticle and papillæ failure was the exception, but here the advantage was on the side of those imbedded in the incisions. Only a small proportion of the purely cuticular sections became centers of growth, and action from these points was almost always feeble and slow. In no instance did the epidermic scrapings or fragments of blister-skins prove of service; but Dr. Fiddes and others have been more fortunate with this plan. Where the entire depth of integument was fixed upon the surface of the sore it remained as a nodular elevation, distinguishable for months after complete cicatrization. In other instances the level of the scar was uniform. The greater success of those grafts which included the papillæ, as compared with the more superficial kinds, I attribute not to the presence of the papillæ, but to the preservation of the deepest and youngest cells of the Malpighian layer of the epiderm lying between the bases of the papillary elevations.

"3. *As to the size of the grafts.* The results of my experiments did not appear to be greatly influenced by the extent of tissue transplanted. The most minute grafts were more frequently lost than those of somewhat larger size; but it is probable that some of them did not include any of the younger epidermic cells. I have since seen portions of skin as large as a shilling readily made to adhere when fixed upon the granulations. The possibility of grafting very small segments is of importance, as we are thus enabled to start numerous centers of cicatrization by means of an inconsiderable outlay of integument. On the other hand, larger pieces of skin in its whole depth are especially adapted for the lessening of deformity and cicatricial contraction. The operation has been successfully applied by Mr. Francis Mason to fill up the frontal gap left after the operation of rhinoplasty.

"I have been unable as yet to detect any difference in the results following the use of grafts from the patient and those observable when the material is derived from strangers. The constitutional condition of the person operated upon is a matter of some importance in prognosis, as debility, especially that induced by intemperance, will as a rule greatly retard and imperil the success; but old age *per se* appears to exercise very little influence over initiation of new growth, or over the rapidity and completeness of the process of cure. In fact, some of the most striking examples of the benefits of the treatment that have come under my notice have been supplied by patients long past the meridian of life.

"M. Reverdin placed the shreds of epidermis upon the sore, their deep surface applied to the granulations, and fixed them with strips of diachylon. Others have followed this plan, and in many instances have found that the contact of the plaster induces, as in M. Reverdin's case, free suppuration, and thus many of the grafts become washed away. The same result has occurred in several of my cases, and I have since limited my applications to strips of linen soaked in water, warmth and moisture being preserved by the use of oiled silk. Daily renewal of the dressing without disturbance of the grafts may be readily effected. As soon as extension of cicatricial tissue from the transplantation is well established, medicated dressings, varying with the condition of the granulations, may be safely substituted.

"From my own observations I feel convinced that, with careful attention to detail, failure will be very exceptional; but disappointment will occasionally occur after repeated efforts, however cautiously conducted."

DIAGNOSIS AND TREATMENT OF INVERSION OF THE BLADDER.—Mr. John Croft (St. Thomas's Hospital Reports), after narrating a case occurring in his own practice and two other cases previously reported, states that while this accident is rare, yet it is all the more important that it should be promptly recognized and treated. "A small, pyriform, red, vascular, elastic tumor, situated between the labia, below the clitoris, and in front of the vaginal orifice; the urethra not distinguishable; the ureters exposed, and perhaps distilling urine; a history of more or less incontinence previous to the appearance of the tumor: these symptoms should lead one to recognize an *inversio vesicæ*, and to distinguish such an affection from a solid polypoid growth. Mr. Holmes has described a vaginal hernia in his work on 'Diseases of Children.' In that malady the urethra can be defined in front of the tumor, which has not the red vascular appearance of an inverted vesical membrane. The best mode of reduction seems to be by taxis, and the thumb and forefinger are the best compressors. They should be used gently. If the child struggle much, it would be better to employ chloroform." In case incontinence of urine follows, faradization seems to offer a reasonable prospect of improvement or cure.

TEMPERATURE IN SERIOUS GUN-SHOT WOUNDS.—These are the conclusions of an elaborate memoir, containing numerous observations, found in a recent number of the *Archives Générales:* "1. In severe wounds from fire-arms the temperature is always reduced. 2. This reduction results from several causes, among which are nervous shock, excitement of combat and consecutive stupor, hemorrhage, finally alcoholism. 3. When a subject having a wound requiring an operation has a temperature below 35.5° C. he will die, and it is useless to operate. 4. When reäction does not occur within four hours after the receipt of the injury, the reäction being in proportion to the prostration, the patient should be regarded as very seriously injured. 5. Burns produce remarkable reduction of temperature. 6. The same is true of penetrating wounds of the abdomen; and this reduction is so much more marked as the stomach is approached. 7. The diagnosis of penetrating wounds is easy, from the characteristic thermometric phenomena which they produce. 8. Intoxication strikingly favors the falling of the temperature. 9. Wounds from shells, other things being equal, cause a more marked reduction of temperature than wounds from balls."

GONORRHEAL OR URETHRAL RHEUMATISM.—Mr. Bond, Surgeon to the Lock Infirmary, St. George's Union, Westminster, gives (Lancet, March 23d) the following deduction from his observations in this disorder: "That urethral rheumatism is a slow form of pyæmic poisoning, due not to a sudden absorption, but to a gradual vitiation of the blood by a gradual absorption of the urethral discharge; that the vitiated state is not maintained independently of the local disease; that, when the discharge is thoroughly and permanently stopped the rheumatism may soon be cured, and has no tendency to return except by the access of a fresh urethral discharge."

APPLICATIONS OF ELECTRICITY.—Prof. Benedict recently read a paper on the application of electricity for the removal of tumors before the Medical Society of Vienna, which is reported in a recent number of the *Wien. Med. Presse.* He points out the great improvements that have been made of late years in the construction and mode of application of apparatus, and refers particularly to the powerful current that can be obtained from the lead-zinc battery of Fromhold. He has himself constructed a carbon-zinc battery of great usefulness, which can be set in action by a concentrated solution of bichromate of potash and sulphuric acid (1 to 15). He mentions as the principal forms of tumors in which electricity has been found efficacious: 1. Inflammatory swellings of the joints, in which, however, the current should not be applied directly to the inflamed part, but to the sympathetic spinal cord or nerves supplying it; 2. Fluid tumors resulting from inflammation, as hydrocele; 3. Angiomata and aneurisms, in which several needles connected with the positive pole should be introduced; 4. Lymphatic tumors, in which negative needles should be passed, so as to break down the larger into smaller tumors; but the current should not be too strong, lest suppuration and ulceration occur; 5. Indolent buboes; 6. Neoplasmata; 7. Carcinoma.

A NEW METHOD OF DESTROYING FAULTY CILIA IN TRICHIASIS OR DISTRICHIASIS.—P. J. Hayes, Surgeon to the Mater Misericordiæ Hospital, successfully resorts to the following operation in "cases of limited *trichiasis* or *districhiasis:*" A Desmarres entropion forceps is applied to the eyelid, and so compressed as to cause arrest of circulation through the included portion. Next, a fine hypodermic syringe charged with a few drops of the tincture of perchloride of iron is passed obliquely through the palpebral margin, pushed to a point just above the roots of the abnormal cilia, and the tincture slowly injected, as it were, against the follicles. This proceeding is repeated in such a way that the two oblique punctures include the group of cilia to be destroyed. After a few minutes loosen the forceps, pull out the lashes carefully, and bathe the eye in cold water. In two or three days, when inflammatory swelling of the lid comes on, use bread-and-water poultices until ulceration occurs, permitting the escape of a narrow slough of subcutaneous tissue with complete removal of the hair follicles. (Dublin Journal of Medical Science.)

THE EXPECTANT TREATMENT IN ABDOMINAL PREGNANCY—PERFORATION OF THE UTERUS WITH THE SOUND.—In a letter from Vienna by Dr. Englemann (St. Louis Medical and Surgical Journal) the history of a case of abdominal pregnancy, under the charge of Prof. C. Braun, is given. The patient died from peritonitis a few days after the uterine sound had been introduced, entering quite deeply, the point to be plainly felt apparently just beneath the abdominal walls, Professor B.

believing that the instrument had entered one of the oviducts. The post mortem showed that the uterus was completely perforated at one point, and almost at another, and that the uterine openings of the oviducts were only sufficient to admit a fine probe. Dr. Martin believes those cases usually described as soundings of the oviducts were really perforations of the uterus. In cases of abdominal pregnancy Dr. M. usually prefers the expectant method, because he considers the operation for the removal of the child and secundines exceedingly dangerous, much more so than the Cæsarian operation or ovariotomy; and that it is better to wait quietly, trusting that the fetus may perish and become encysted, or be eliminated by a process of suppuration.

In our next number we shall publish an interesting case of abdominal pregnancy reported by Dr. Page, of Iowa.

The fact that in the Vienna case given above the uterine sound, in the hands of one of the ablest obstetricians and gynecologists in the world, perforated the uterus, and this too when the operator believed, until an autopsy told the truth, that the instrument had passed into an oviduct, should impress every one with the utmost caution, not only as to the cases in which this instrument may be used, but also in the manner of using it.

Pepsin in the Diarrhea of Children.—Dr. A. Davidson states (The Practitioner) that there is a form of diarrhea, arising from feebleness of the digestive powers, often observed in children from one to two years old, in which antacids, aromatics, astringents, etc., are valueless, while pepsin rarely fails to restore the child to health. The symptoms of this form of diarrhea are as follows: "The motions are frequent, and vary considerably in character in different cases, but always show the presence of undigested food. Usually the action of the bowels take place directly after the time of feeding, and this circumstance leads the mother or nurse to describe the child's state as one in which the food passes right through it, and does no good. Of course it is impossible that the food really passes through the intestinal canal so rapidly as this description would imply. What really occurs is that the ingestion of food into the stomach excites the action of the bowels, and leads to the expulsion of the half-digested food previously lying in the large intestines." Small doses of pepsin should be given with the food, and immediate improvement, with ultimate cure, will result. Dr. Davidson states that the preparation of pepsin which he generally uses is the wine, the dose being one tea-spoonful three or four times a day.

HEMP-SAW FOR THE EXCISION OF POLYPOID GROWTHS.—Dr. Alfred H. McClintock narrates (Dublin Journal of Medical Science) a case of intra-vaginal uterine polypus, in which the pedicle, as thick as a man's thumb and tightly encircled by the os uteri, was removed by what is termed a *hemp-saw*. The operation was thus performed: the perineum was retracted by a duck-bill speculum, the tumor seized with a vulsellum and drawn down to the vulva. Then there was passed round the pedicle, by means of Gooch's canula, "a loop of twisted silk fishing-line," the canula slipped up on it and firmly held, the ligature pulled tight, and drawn alternately with one and the other hand to and fro, keeping a pretty tight strain on it all the time. In thirty-five seconds the division of the pedicle was accomplished. Dr. McClintock, in the course of his remarks upon this method of operating, says: "The ligature was applied and used through a Gooch's double canula, whereby the vagina was protected from any injury which the sawing of the cord might have inflicted. In operating on a tumor higher up, or on a large tumor, it would be desirable to have the end of the instrument somewhat curved, so as to assist in preventing the cord from being chafed or worn by the friction against the distal orifice of the canula. Inasmuch as a closely-twisted silk or hemp cord is capable of sawing through the neck of the fetus, there can be no doubt of its being adequate to cut through the pedicle of any polypus we ever met with in the uterus or vagina. This in itself is of no small advantage, as I have often seen the iron wire and the wire rope of every degree of thickness, when used with the écraseur, break on fibrous tumors, thereby causing much trouble and delay in the operation."

Dr. McClintock further advises, to prevent the possibility of the hemp ligature giving way, to employ a long piece of cord, and from time to time in the operation draw down one end of this ligature so as to bring a fresh portion of it in contact with the surface we are operating on.

Quite recently we had a letter from a friend, whose operative skill and professional attainments are admirable, and he gave about the same experience with wire and wire-rope in these operations which Dr. McClintock mentions. Several times too we have found the same thing take place, the wire or the rope breaking, the operation just commenced or even half completed. We feel quite ready to renounce the wire-rope écraseur and try the hemp-saw.

It is proper to state, for the benefit of those of our readers who have not already learned the fact, that while the application of the hemp-saw to the removal of uterine polypi belongs to Dr. McClintock, yet its original device belongs to Dr. Geo. H. Kidd, of Dublin, for some years the editor of the Dublin Quarterly, who used it for decapitation of the fetus. Dr. Beatty, an honored veteran in obstetrics whom no medical man would visit Dublin without seeing, uses the following language in regard to this invention of Dr. Kidd's: "Any one who had gone through the toil and difficulty of the old operation of evisceration in a case of transverse presentation, where the arm was down in the vagina, the child a large one, and no possibility of turning, would rejoice at the introduction of such an operation. The simple operation by means of a cord being substituted for the fearful operation of evisceration was one which those who had gone through the latter must rejoice at, and which the gentlemen of the present day ought to be very happy at having placed within their reach. He had himself toiled for an hour or an hour and a half over the operation of evisceration, the most odious and disgusting in obstetric practice. The simplicity of Dr. Kidd's operation seemed to him almost miraculous contrasted with that he had alluded to, and it was one of the greatest boons conferred on midwifery in modern times."

SYPHILIS-CORPUSCLES OF LOSTORFER.—The Boston Medical and Surgical Journal of April 11th says: "We are informed that the committee of accomplished microscopists appointed from the Boston Society for Medical Observation to investigate the subject of syphilis-corpuscles in the blood have reported, as the unanimous result of their individual and independent researches, that their conclusions are negative; that the bodies described by Lostorfer as peculiar to syphilitic blood were found in the blood of syphilitic patients and of healthy persons as well, and that the so-called corpuscles appear to have their origin in certain physical or chemical changes to which the blood globules are subjected in the course of prolonged microscopic examination."

Notes and Queries.

A Carminative and an Emmenagogue wanted.—A Nebraska correspondent writes us for the above, and we shall comply with his request, merely entering a *caveat* against relying on formulas for all cases. The following is a modification of Dewees's carminative, which is regarded as of considerable value by many practitioners who have used it:

℞.	Magnesiæ calcinat.,	ʒj;
	Tinct. opii,	gtt. xx;
	Tinct. asafetid.,	f. ʒj;
	Aqua menth. pip.,	f. ℥j.

M. S. Ten to twenty drops, according to age of infant.

A good emmenagogue pill* in anæmic amenorrhœa is composed of equal parts of dried sulphate of iron, white turpentine, and aloes. The pill may weigh two or three grains, and may be given twice or thrice daily, regulating the frequency of repetition and the weight of the pill by the condition of the bowels.

Another efficient emmenagogue pill† may be made of equal quantities of *rue*, *savine*, and *ergotine*, and half as much either of aloes or of gamboge. The pill may weigh from three to four grains, and two or three may be given three times a day. *Apiol*, the active principle of parsley, is not held in such high esteem in this country as it is in some parts of Europe; partly because it has been so little tried, but chiefly because that which is generally found in our drug-stores is either entirely factitious or else grossly adulterated. Undoubtedly this medicine is one of the safest and most certain of that very uncertain class of medicines called emmenagogues.

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* This pill we have previously mentioned in the American Practitioner.

† This is nearly the same as recommended by Courty.

Faradization—the positive electrode passed into the uterine cavity, the negative applied to the hypogastrium—gives oftentimes a very prompt success in inducing a sanguineous discharge from the uterus; but in order that such result should follow, this means should be used only at a time when the other phenomena of menstruation manifest themselves, the flow only wanting. T. P.

A CASE OF ASCITES.—Dr. George Boerstler, of Lancaster, Ohio, communicates the following:

"Mrs. R., age fifty-two, mother of ten children, nine of whom are living, had always been in good health until the latter part of the winter of 1869. She occasionally suffered from indigestion, accompanied with palpitation, but domestic remedies always corrected the disorder. A fullness of her abdomen was noticed, which she attributed to the accumulation of gas in the stomach and bowels, but which was not removed by ordinary domestic remedies. She sought medical advice, and was found to have ascites. The abdomen began gradually to enlarge to such an extent as to impede respiration, and there was considerable pain, particularly in the right hypochondrium; appetite impaired and bowels constipated; passes the usual quantity of urine, which is slightly acid and contains numerous crystals of uric acid; no albumen; no yellow appearance of the skin or of sclerotic; no anasarca nor swelling of the extremities.

"On the 27th of April I drew off five and a half gallons of light, straw-colored fluid. Under the use of an occasional cathartic, with tonics and diuretics, she was soon able to leave her room, and expressed herself as feeling quite well. The fluid, however, began to accumulate, and another tapping was necessary, to be followed by still others. I give the date of each operation, with the quantity of fluid removed: July 6th, 4½ gallons; August 8th, 4 gallons; September 2d, 4 gallons; October 3d, 4½ gallons; November 15th, 3½ gallons; March 9th, 4 gallons 2 pints; March 30th, 3 gallons; April 20th, 4 gallons; May 3d, 3 gallons 1 pint; June 10th, 5 gallons; June 28th, 3½ gallons; July 15th, 4 gallons 2 pints; July 29th, 3 gallons; August 29th, 4 gallons 1 pint; September 15th, 4½ gallons; October 1st, 3 gallons 3 quarts; October 17th, 3½ gallons; October 31st, 4 gallons; November 13th, 3 gallons 3 pints; November 26th, 3 gallons; December 8th, 3 gallons; December 21st, 3½ gallons; January 2d, 1872, 4 gallons; January 14th, 4 gallons 1 pint; January 15th, 2 gallons. Number of times tapped, 29. Total amount of fluid removed, 111 gallons 1 pint.

"The remarkable features of this case seem to be the frequent number of tappings and the large quantity of fluid removed in the short period of one year eight months and nineteen days. It was surprising that the patient's physical powers did not give way sooner under the constant and enormous drainage from her system. Many expire after the second or third tapping, and comparatively few live long after the fifth or sixth. Cases are recorded where the fluid has never again accumulated after the first operation. A similar case came under my observation. I drew off six gallons of fluid from a female who was pale, anæmic, and very much emaciated, but made a rapid recovery, without the dropsy again returning. On but two occasions was my patient confined to bed longer than twenty-four hours after being tapped. After the operation had been repeated the twenty-sixth time there was a constant eructation of sour, acrid fluid from the stomach, and every article of food taken was immediately vomited. This was produced by some indigestible food which she had taken a few hours before being tapped, and was relieved by bismuth and lime-water. After the twenty-ninth tapping the physical powers succumbed, and the patient expired on the following night. There was never any œdema or anasarca. Microscopic and chemical examination of the urine revealed nothing indicative of renal disease. The cause of the dropsical effusion is rather obscure; but from the history of the case, and the constant pain which seemed to concentrate itself in one place—over the liver—there is evidence that the liver was the organ principally involved, and the disease in all probability was cirrhosis. A post-mortem examination could not be obtained, which would have thrown much light on the pathology of the case."

DYSMENORRHŒA CAUSED BY AN INTRA-UTERINE POLYPUS—CURED BY THE REMOVAL OF THE GROWTH.—Dr. Melvin Rhorer, of Louisville, communicates the following interesting case. Before presenting it, however, we wish to remark that the diagnosis of mechanical dysmenorrhœa is generally difficult, often too impossible, without direct exploration of the uterus by means of the finger, by the uterine sound, and by the dilatation of the cervical canal by sponge-tents. Unpleasant as it is to resort to such an examination, especially in the case of a virgin, yet it was eminently proper under the circumstances narrated by Dr. Rhorer, and the sequel proves both the correctness of the diagnosis and of the treatment.

"The latter part of December I was called to an unmarried lady, twenty years of age, suffering with dysmenorrhœa. Menstruation commenced at sixteen, and for three years has been both painful and protracted, sometimes lasting fourteen days. She had taken various remedies, but with no permanent benefit, from excellent physicians. Thinking, both from the character of her suffering as well as from the utter failure of all constitutional treatment to benefit her, that there might be some mechanical obstruction, I determined to dilate the cervical canal and explore the uterine cavity. Accordingly four sponge-tents were successively introduced, commencing, of course, with the smallest; and immediately after the withdrawal of the fourth I readily introduced my finger into the uterus, and, probably equally to the joy of myself and patient, discovered a polypus, about the size of a conical bullet, attached to the posterior wall near the fundus by a pedicle half an inch long. The polypus was removed by a very delicate *écraseur*, only slight hemorrhage, no unpleasant after-effects. Her menstruation now is painless, and lasts but four days."

LETTER FROM MR. LAWSON TAIT.—We publish below a letter recently received from Mr. Tait. It is of some interest, both as to the probable period when Sir James Simpson first resorted to the formation of a vesico-vaginal fistula for the cure of cystitis, and also for the unequivocal indorsement of such treatment in certain cases of this disease. Indeed it seems astonishing that any physician of ordinary intelligence should blindly rush to its condemnation.

A similar operation was recommended in the case of the male, many years ago, by Mr. Guthrie, as the following extract from Copeland's Dictionary, American edition, Vol. III., page 1310, clearly shows:

> "When everything has failed" (*i. e.*, in the treatment of cystitis) "it has been proposed by Mr. Guthrie *to open the neck of the bladder* by an incision, as in lithotomy, so as to allow a free outlet to the mucous secretion as fast as it is poured out, and thus afford the bladder comparative repose, on the same principle as the knife is recommended for anal fistula and fissure."

Probably it was this suggestion of Mr. Guthrie which led Dr. Willard Parker to resort to this operation in the case referred to by Dr. Emmet in his able and interesting paper published in this journal. These remarks made, we call the attention of our readers to Mr. Tait's letter.

BIRMINGHAM, February 28, 1872.

DEAR SIR—The first case of which I have cognizance of the operation having been done by Sir James Simpson occurred, I think, in 1860. I have unfortunately no record of it. I feel certain that he had done the operation before, for he on several occasions spoke of the operation, yet forgot the case I refer to till I reminded him of it. It is more than likely therefore that it was not his first. Dr. Keith, the celebrated ovariotomist, has told me that the late

Mr. Syme had practiced the operation on a male successfully. There can be no doubt that it is a valuable and thoroughly established proceeding, based on sound surgical principle. The criticisms in the Clinic are ill-digested speculation of mere theorists.

Yours truly, LAWSON TAIT.

RESOLUTIONS ON THE DEATH OF DR. WILLIAM PAWLING.—At the meeting of the Boyle County Medical Society, held at Danville, Ky., April 9, 1872, the following preamble and resolutions were introduced, and adopted unanimously:

Whereas God, the Supreme Dispenser of life and death, hath called away from his sphere of action here a member of this Society. Dr. William Pawling, who from his long and useful professional life, his earnest coöperation in the founding of this Society, and his untiring labors for its advancement and perpetuity, his high-toned ethical bearing among his fellows, his extensive and successful practical knowledge and skill, and in his quiet and uncomplaining, indeed cheerful, Christian fortitude, as 'neath the weight of years he toiled on his professional rounds to the end, hath left us much in his example for imitation, therefore be it resolved:

1. That in the death of our confrere, who for more than a half century steadily marched in the ranks of our profession, battling with disease, and has now fallen at more than three-score and ten with armor still on, this Society has met with a profound loss.

2. That while we bow in submission to the Sovereign will we will ever cherish with lively interest the memory of our deceased brother, and sincerely sympathize with his family in their irreparable loss.

3. That these resolutions be spread upon the minutes of the Society, and published in the Kentucky Advocate and the medical journals of the state, and a copy sent to the family of the deceased.

JOHN D. JACKSON,
A. R. MCKEE, } *Committee.*
R. W. DUNLAP,

INDIANA MEDICAL SOCIETY.—We hope our Indiana friends will bear in mind the meeting of the Indiana State Medical Society on the third Tuesday of May, and make their arrangements to attend it. This Society is growing in numbers, in power, and in influence; but still all these may be greatly increased, and it rests with the profession of the state to make this organization at once the exponent of, and the contributor to, their culture, honor, and usefulness. Medical gentlemen from other states are cordially invited to attend this meeting.

RHETORICAL LICENSE.—The majority of doctors writing for medical journals express their ideas clearly, directly, and plainly; but occasionally they get astray in their facts and in their rhetoric. Quite recently we have met with two sentences, the one illustrating the former error, the other the latter, in the pages of two of our contemporaries; and—the coincidence is remarkable—they both occur in well-meant tributes to eminent members of our profession who have recently departed this life; seeming to indicate that in this sort of post-mortem literature special license is granted the writers. Number one is as follows: "Though now silent in the pallid embrace of death, his name is enshrined in a pyramid of facts which will secure to it a sacredness and prolonged existence, while the memory of his life remains a model and exemplar of all that is best and most worthy of imitation by the profession which he adorned." A pyramid may be a shrine, but it is a burial shrine; and how a name thus buried can be got out we do n't understand. Still less do we understand how memory can be a model and exemplar; but least of all can we comprehend what is meant by the pallid embrace of death. We have read indeed in sacred writings of death on the pale horse, and in profane of pale death, *Pallida Mors;* but why a pallid embrace should be attributed to death any more than we should attribute a green, yellow, red, blue, or black embrace to any other personification, or to any person or thing, we can not tell.

Number two reads as follows: "While in the latter metropolis he had to contend with the greatest poverty, want, and suffering, equaling for a time that described by the Hon. John DeQuincy as occurring to himself in his classic work, entitled 'The History of the Opium-eater.'" Certainly there was a Thomas DeQuincey who wrote *Confessions of an English Opium-eater;* but we do not believe in Hon. John DeQuincy any more than we do in Prester John, and we suspect his classic work has no more existence than the differential and integral calculus of the Hottentots.

T. P.

THE AMERICAN PRACTITIONER.

JUNE, 1872.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them ; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way ; and we want downright facts at present more than anything else.—RUSKIN.

Original Communications.

GRANULAR LIDS.

READ BEFORE THE COLLEGE OF PHYSICIANS AND SURGEONS OF LOUISVILLE, APRIL 4, 1872.

BY D. S. REYNOLDS, M. D.

The terms "granular lids" and "granular ophthalmia" are unfortunately used to designate two very widely different affections: one a truly granular affection in appearance, usually denominated *trachoma;* the other, a papillary hypertrophy of the palpebral conjunctiva, which I propose to call *papillary conjunctivitis* or *papillary ophthalmia.*

Trachoma is a peculiar form of conjunctivitis, beginning in the retro-tarsal fold, and soon after the onset extending into the lining of both upper and lower lids, and occupying the ocular conjunctiva to within a line of the corneal margin. When early treatment fails to arrest the progress of the disease an extension over the entire corneal surface is apt to occur, producing a most intractable form of pannus.

The disease appears to originate in the subconjunctival tissue, and at an early period small cream-colored, egg-shaped bodies, closely resembling grains of tapioca, appear beneath the epithelial layer. These small bodies are neoplastic formations, perfectly symmetrical in form, and quite hard. When these neoplastic bodies exist in the palpebral conjunctiva the friction of the lids over the cornea soon gives rise to corneal abrasions, which result in the development of pannus or irremediable opacities.

Trachoma produces structural changes in the palpebral conjunctiva which, when the disease becomes chronic, manifest a decided tendency to the production of entropium. It is well known that most cases of entropium arise from chronic trachoma or the injudicious use of caustics. It is seldom, however, that we meet with cases of entropium that are solely due to trachomatous disease; for, ten to one, the disease will not exist many days before some one, who thinks himself a full-grown oculist, will give it a touch with the "mitigated stick" or the unmitigated lapis infernalis.

Trachoma sometimes occurs very suddenly, most frequently in the night. It generally comes on with the ordinary symptoms of a violent catarrhal conjunctivitis, rapidly increasing in severity until the patient is unable to open the lids or bear the sunlight. Frequent gushes of hot tears, with tumefaction of the lids, constant aching pain, with a sense as if sand had become lodged under the lids, headache, loss of appetite, constipation, frequent rigors followed by fever, constitute the most prominent and constant symptoms.

Frequently trachoma and papillary ophthalmia are coexistent. In such cases a collyrium of carbolic acid, three grains to an ounce of water, with perhaps the addition of one grain of sulphate of atropia, instilled into the eye every hour, free and frequent ablutions with warm water, containing one drachm of muriate of ammonia to the quart of water, and a full purgative dose of calomel, will usually produce free mucopurulent discharge, with an abatement of all the symptoms, in a few hours.

After the disappearance of the trachomatous character of the disease a simple conjunctivitis is all that remains, which should be treated with astringents, as alum or tannin, in solution. But if the disease become chronic, such extensive organic changes will occur in the deeper-seated tissues as to give rise to permanent contraction of the orbicularis palpebrarum, and most likely entropium also. In such cases the usual operation for the relief of the entropium should be performed, and at the same time the operation known as "tarsorrhaphy" or "canthoplasty," for the cure of the blepharospasm. It may be asserted that, as an almost invariable rule, canthoplasty should constitute the first step in the treatment of chronic trachoma. The use of sulphate of copper, nitrate of silver, or other substances capable of excoriating the conjunctival membrane, as well as all preparations of lead, should not under any circumstances be employed in the treatment of any form of trachoma. It may be well to mention that the compressive bandage will be found an invaluable adjunct in the management of acute cases.

Papillary ophthalmia is an entirely different affection from trachoma; is in no sense granular. It follows the more violent acute symptoms of purulent ophthalmia, and not unfrequently occurs as a primary lesion in persons of debilitated constitution.

Papillary ophthalmia is sometimes due to endemic atmospheric causes, and has been thought by some to have prevailed epidemically in certain parts of Europe. Almost every writer on ophthalmic medicine and surgery has grouped both the papillary and the trachomatous diseases under one head; some of them describing the two diseases as different stages or varieties of granular ophthalmia, so called, and gravely asserting that the treatment should be the same in both forms of disease.

The pathological peculiarity of papillary conjunctivitis consists in an hypertrophy of the conjunctival papillæ, which must necessarily be confined to the palpebral portion of the membrane, as there are *no papillæ* in the ocular conjunctivæ. How absurd then to talk about unity in diseases so opposite in their very nature! The hypertrophied, elongated papillæ constitute villosities over the entire surface of the palpebral conjunctivæ, which gives rise to distressing symptoms, chiefly on account of the extraöcular pressure. When the papillæ are thin and flabby a stiffness in the lids, with slight sense of scratching on the upper surface of the eyeball, constitute the sum of the subjective phenomena; when, on the contrary, there is great vascularity and tumefaction of the membrane, pain, heat, a sense of dryness on the surface of the eyeball, with frequent gushes of hot tears and throbbing sensation, with ptosis and intolerance of light, are all present, more or less. There is but slight vascularity of the subconjunctival tissue in this affection, the morbid action being almost exclusively confined to the mucous membrane proper.

There are different types of this disease, on account of the variety of causes that tend to its production; but I dare say the difference is almost wholly due to the presence of complications, such as depend not upon the presence of papillary conjunctivitis, but such as are brought into activity by the causes which produce the last-named affection. How can we expect to arrive at a proper conclusion as to what is curative and what hurtful unless clear lines of distinction be drawn between the pathological features of diseases similar in nothing except the site of their development?

Prof. Williams, of Boston, says that there are "two forms of roughness of the mucous surface (of the eyelids), one a mere hypertrophy of the conjunctival follicles." Again he says "now and then the enlarged follicles become pedunculated, and seem almost detached from the surface;" that is to say, cavities that hang out and become pedunculated. I have heard of the man who, to avoid meeting bruin on the perilous edge of battle, went into a hole in the ground and took the hole *in* after him; but I had never, before reading the classic pages of Prof. Williams's book on diseases of the eye, heard of holes (follicles) hanging so far out from the surface as to "seem almost detached." Then we, of course, need feel no surprise that Prof. W. should state that "the treatment to be pursued is the same in both forms of disease."

In that form of papillary ophthalmia arising from simple catarrhal ophthalmia sulphate of copper, applied once in the course of five or six days, by lightly gliding the stick over the exposed papillæ, followed by the cold, wet compressive bandage, with a collyrium every morning and evening of one scruple of alum to an ounce of water, or one drachm of tannin to the ounce of glycerine, continuing the compressive bandage most of the time during the day, will be found successful in most acute cases. If there be manifestations of constitutional disturbance, of course constitutional medication must be promptly instituted.

In chronic papillary ophthalmia, arising from neglected catarrhal conjunctivitis, it will be best to apply muriate of ammonia in substance to the affected membrane at least once a day, and at the same time the collyrium of alum before mentioned. If the disease be a sequel to purulent or "Egyptian" ophthalmia, then there will be observed considerable thickening of the conjunctival membrane from interstitial deposit of plastic matter, the papillæ will not project far beyond the surface, and there will be noticed, upon close observation, a considerable amount of contraction of the orbicularis palpebrarum, constituting permanent blepharospasm, thus greatly endangering the safety of the cornea by friction. In all such cases section of the orbicular muscle, by extending the palpebral fissure outward, and securing the skin and mucous membrane along the whole course of the wound by sutures, will be a prerequisite to the successful treatment. Having performed the tarsorrhaphy or canthoplasty, the only after-treatment necessary in most cases will be alum, tannin, or chloride of zinc in solution. The strength of the zinc collyrium should never be greater than three grains to an ounce of water. Generally one grain will be sufficient if applied every two hours during the day.

Another form of papillary ophthalmia is that in which the patients are of strumous taint and much debilitated prior to the attack of conjunctivitis. In this class of cases iodide of iron, quinine, good diet, outdoor exercise, and comfortable clothing should be first called into requisition. The local application of turpentine, one half drachm to an ounce of cod-liver oil, every morning and evening will be about all that is necessary. In fact I believe the very best information for one to possess as to the treatment of papillary ophthalmia and trachoma consists in knowing what not to use or apply to the affected membrane.

While almost all writers on ophthalmology laud in the highest terms the mitigated nitrate of silver and the sulphate of copper, applied in substance, frequently repeated, they take the pains to mention that many cases are incurable. Now, as a matter of daily observation, every one knows that twenty or forty grains of nitrate of silver to an ounce of water will, if frequently applied to a mucous surface, very soon excoriate and finally destroy the membrane itself. This being true, how much more dangerous the daily application of sulphate of copper in substance or the "mitigated stick," the liquor potass. acetic, and sulphurous acids may be can easily be conjectured. I take the pains to assert that no excoriating application can possibly fail to aggravate the disease under consideration; that caustic applications are wholly unjustifiable, and their use in papillary conjunctivitis should be made actionable at law; because every one must know that caustics destroy mucous membrane, and that when once destroyed it can never be reproduced.

I am well aware that it is impossible to lay down fixed rules of treatment for any but individual cases, but I do hope that what I have just said will deter many from the reckless use of powerful caustics in the treatment of diseases of the conjunctival membrane. I cherish the hope also that a better understanding may be had of the pathology of what has been vaguely called by most ophthalmic writers *granular lids.*

LOUISVILLE.

PROFUSE MENORRHAGIA TREATED WITH HALF-GRAIN DOSES OF SULPHATE OF MORPHIA.

BY W. T. CARTER, M. D.

Mat Stone (colored), aged twenty-nine, mother of four children, youngest about thirteen months old, on February 15th menstruated for the first time since the birth of her last child. Menstruation continued about four days, during which she lost a very small quantity of blood. Her subsequent menstruation, which occurred in very nearly two weeks after the disappearance of the first, was so profuse, being also accompanied by severe pains in the hypogastrium, as to reduce her to a state of extreme debility. On examination I found the os uteri patulous, hypertrophied, with very little if any eversion, and great vascularity of the mucous membrane of the os and cervix. The history of the case and the condition of the uterus preclude the possibility of an intraüterine polypus; and the length of time which has elapsed since the birth of the last child, with the smallness of the uterus, show plainly that the cause of the menorrhagia was not imperfect involution. The patient being an inveterate eater of dirt (pica), which caused an obstinate constipation, not having more than one evacuation of the bowels weekly, I ordered a mild laxative, to be followed by drachm doses of fluid extract of ergot every two or three hours. Having given several doses of the ergot without noticing the least perceptible cessation of the discharge, I added tincture of cannabis and gallic acid. This caused an amelioration of symptoms, which returned with increased violence if the patient assumed a sitting posture in bed even. Various other remedies were exhibited, to which were subjoined astringent injections. All, however, proved perfectly valueless. Continued loss of blood, suffering, and inability to take only small quantities of food were rapidly exhausting the system. Cold applications were made, but failed to cause contraction of the uterus, which was now remarkably relaxed. There was an excessive secretion of urine, attended by a continued escape of that fluid from the bladder.

The pain in the hypogastrium, which was at times periodical, increased in severity. She complained of restlessness, great thirst, and a dryness of the skin. Half-grain doses of sulphate of morphia were ordered to be given as often as necessary to insure complete freedom from pain. The first dose was administered at ten P. M., after which she passed a comfortable night, and reported herself in the morning as feeling much better. Noticing a marked diminution in the sanguineous discharge, the morphia powders were continued. After having taken five powders, one being given every six hours, the flow ceased and she gradually resumed her natural health. She has menstruated once since without any trouble. If the morphia had failed I should not have hesitated to employ the plan of treatment recommended by Dr. Atthill, "the introduction up to the fundus of the uterus of ten grains of the solid nitrate of silver, and leaving it to dissolve there."

LOUISVILLE.

CYANOSIS FROM NITRATE OF SILVER REMOVED BY IODIDE OF POTASSIUM.

Reported to the State Medical Society of Kentucky, 1872.

BY L. P. YANDELL, JR., M. D.,
Professor of Materia Medica and of Clinical Medicine in the University of Louisville.

Cyanosis, or blue-skin, may be due to several causes, and may be organic or functional. The unclosed foramen ovale is a frequent source. It may arise from the deposit of blue pigment in the skin, and blue sweats have been mentioned by authors. In the collapse of cholera cyanosis is observed. Dr. Erasmus Wilson quotes Billard d'Anger's case of a girl with cyanoderma of the forehead, face, neck, chest, and abdomen, who blushed blue instead of red. Most practitioners have met with cases of cyanosis produced by nitrate of silver, and such cases were more frequent many years ago, when nitrate of silver was more frequently employed for epilepsy than it is at the present time. According to most authorities the stain is permanent and not amenable to treatment. Many remedies have been suggested—iodine, nitric acid, and acid nitrate of potash being the favorites; but I have found no cure recorded. As much as fifteen grains of nitrate of silver have been given thrice daily, in pillular form, without injury; but five grains in solution seems to be the largest dose capable of safe administration. It is the generally-accepted opinion that the blue skin never supervenes when the remedy is given for a less period than three months. The discoloration first begins about the gums and fauces. It has been found in the coats of the intestines and eyes. It may appear several months after cessation of the use of the medicine, and exposure to the sun seems to predispose to its development.

The stain has been variously described as blackish, bluish, grayish, slate color, and bronze. The mineral is deposited in the deeper parts of the skin, and is most abundant where the skin is most vascular. A blister upon the skin produces a white vesicle, as in the normal cuticle.

The two cases which have suggested this report are similar in many respects. Both were young merchants, and both had been treated unsuccessfully for epilepsy by nitrate of silver in their youth. Both contracted syphilis, and for tertiary symptoms got iodide of potassium. This drug was given in from ten to sixty-grain doses, thrice daily, for a number of months, in connection with ferruginous or bitter tonics. One of the patients was forced to discontinue the iodide because of its disagreeable effects upon the system. The other took it until all traces of syphilis had passed away, and he increased in flesh under its use. In both cases the fading of the stains was gradual. In the first case there is a faint trace of discoloration remaining, though it is scarcely perceptible. In the second, which was much the darker of the two, there is not a shadow of the disfigurement. The iodide of potassium was not given in either case with reference to the cyanosis, and its beneficial effects were observed by me accidentally more than a year after their occurrence. It may be well to state that both patients were treated by the moist mercurial vapor bath during much of the time that they were using the iodide of potassium, and the abundant diaphoresis may have assisted the action of the iodide. I would suggest therefore for the treatment of nitrate of silver cyanopathia the use of the vapor bath in connection with the iodide of potassium.

LOUISVILLE.

IMMUNITY FROM DISEASE.

BY A. P. MERRILL, M. D.

Entire immunity from any particular disease is an advantage enjoyed by a smaller number of persons than is generally supposed. In case of small-pox and several other diseases it is presumed to be attained by suffering a single attack; but all observation teaches that when any one of them becomes epidemic the theory of entire protection is frequently falsified. That partial immunity from this class of diseases commonly results from a single attack, however, is proved by the fact that the recurrence of any one of them in the same subject always presents the disease in a modified form, and in a lower grade of severity. This feature is particularly recognized in small-pox, which upon its return is called varioloid to distinguish it from an original attack, and it is so called as often as it may occur. The eruption in this case bears only an imperfect resemblance to that of the primary disease, the characteristic umbilication of the pustules being often wanting, but its contagious character is retained. So also of the vaccine disease. Many persons are liable to the morbid action of its virus a second, and even a third and fourth time; but in these repetitions the pustule, although generally retaining its characteristic umbilication, differs from the primary vaccination in its larger size and greater irritability. Very often there is also greater constitutional excitement; but whether the contagious principle has been continued as in secondary small-pox has not, so far as I know, been proved. Analogy, however, would lead us to expect it.

There is scarcely room for doubt that perfect immunity against the recurrence of small-pox and the vaccine disease may be secured by certain repetitions of either; and it may well be doubted whether these are not the only forms of disease of which this fact can be affirmed. But it appears to be a growing, popular, and to some extent professional belief that in consequence of constant changes in the system, by which effete particles are thrown off and replaced by nutrition, this immunity is impaired or destroyed, and that on this account vaccination or inoculation for small-pox requires to be repeated. This is undoubtedly a mistaken belief; for, besides the fact that, according to the teachings of physiology, the new matter thus introduced takes on the precise character of that discarded, we constantly meet with persons who have been protected from both small-pox and vaccine by a single operation of either. In my own person such protection from a single vaccination in infancy has lasted me seventy years; and I have met with other cases in which the protection afforded by a single vaccination has endured for a long lifetime, and resisted many exposures to small-pox and all epidemic influences of the disease. Thus is immunity against these diseases sometimes secured by once having them; and it seems probable that this would be the case more frequently were proper care taken in conducting the process of vaccination, the efficacy of which is often impaired by interference with the course of pustulation. Few of the precautions inculcated by Jenner and his immediate successors in this respect are now observed, and a very large majority of cases of vaccination escape professional scrutiny during the progress of the disease. The peculiarities of the vaccine cicatrix are some guide in the formation of an opinion as to the operation having been performed; but they are uncertain indications of the immunity secured, and ought not to be relied on for that purpose. The only certain means of obtaining this immunity is to revaccinate until the vaccine virus will no longer produce a pustule, when the subject will be equally secure from the operation of the small-pox contagion.

A long and extended experience in vaccinating has afforded me no evidence that the vaccine virus deteriorates by many repetitions in the human system, or that anything is gained by deriving the contagion fresh from the cow; nor have I observed that other diseases are often communicated in conjunction with the vaccine. This mingling of diseases, if it ever occur, is a rare exception to a general rule, as I have sufficiently proved by experiments, embracing many thousand subjects, among the negro race in the South. After all, my firm conviction is that this mysterious principle, contagion, so uncertain and irregular in connection with other diseases, is ever true to its purpose in the propagation of small-pox and the vaccine disease among the unprotected; and that the want of immunity from the former, causing such extensive suffering and mortality under epidemic influence, is largely due to mistaken views in regard to vaccination, which I do not doubt deserves all the credit accorded to it by Jenner.

Immunity from measles, scarlatina, hooping-cough, and mumps is also supposed by many to be secured by single attacks of these diseases; but observation scarcely justifies this doctrine. Under epidemic influence they all reäppear with certain modifications; and there are good reasons for doubting whether perfect immunity from such recurrences is ever secured by any number of repetitions of these diseases. Immunity against the severe and fatal grades is all that can be expected. These are diseases of childhood, however, and children are more liable to repeated attacks of them than adults. In the latter the recurring disease is in general less distinctly developed; but no one of them ever prevails as an epidemic without affecting many adult subjects in the locality where it exists, and especially those who may be attacked by prevailing fevers. The watchful eye of the physician often detects the diagnostic symptoms in cases unnoticed by the sufferer, who is apt to mistake them for signs of some other disease. Measles is often mistaken for roseola, scarlatina for erysipelas, hooping-cough and mumps for a common cold, etc.; still it is not uncommon to meet with adults who are fully impressed by the belief that they have suffered from repeated attacks of one or more of these diseases, which have been so well developed as to be unmistakable in their character. In the South a recurrence of measles under epidemic influence is common; but if the patient is known to have had the disease previously it is apt to be called roseola, or "French measles," to which people are supposed to be liable more than once. But in most of these cases of secondary measles the disease bears its usual diagnostic symptoms quite as distinctly as does small-pox in the form called varioloid. In the early years of the late war many Confederate soldiers died of these secondary attacks of measles, the disease being severely epidemic in many of their encampments.

A single attack of the more violent grade of periodic or malarial fever secures the same partial immunity against the return of this class of diseases in their severe and fatal form, and this is found to be an acclimatizing process of high importance to immigrants into malarial regions everywhere. By no other known means, except by preventive medication, can they be protected from the sudden and unexpected attack of a form of disease which comes on in a very insidious manner, creating no alarm by its inceptive violence, but in a frightfully large proportion of cases proving fatal to the sufferer in a short space of time. Without this ordeal of disease no extended residence in malarial regions secures the immigrant from this fatal grade of periodic fever, and the rule is equally applicable to yellow fever. The partial immunity thus secured places the immigrant upon the footing of security with the native-born inhabitant, and a want of attention to its importance is quite as productive of fatal results as the neglect of vaccination is in case of small-pox. Under the mistaken belief that the benefit of acclimatization can be secured by residence merely many lives are sacrificed in hot climates. Immigrants into the more intensely malarial regions of the South sometimes escape the prevailing fever for twenty years, vainly flattering themselves that they are protected from it by acclimatization, and then fall victims to a disease of such virulence as to run its course in from five to seven days. An ordeal of disease protects them from such a fate, not by exempting them from the fever, but by rendering its attacks mild and curable; and I have no doubt the same is true in regard to immigrants into the newly-settled regions of the West, not one of whom is secure from the more violent form of fever until he has once had the disease. In Mexico, in the West India Islands, and upon the African coast the same is said to be the necessary process of acclimatization.

Whether the same degree of immunity is secured by a single attack of Asiatic cholera I am unable from my own experience to judge; but it is rendered probable by the fact that considerable portions of East Indian population, in districts where the disease prevails endemically, are considered exempt from its fatal effects; and fatal secondary attacks in this country are uncommon. There can be little doubt either that the principle of partial immunity was illustrated also by the destructive epidemics which prevailed in the middle ages, when twenty million lives are said to have been lost in Europe by the black-death, and in the single year 1499 thirty thousand people fell victims to the sweating sickness in London alone; an amount of mortality which bore at that period so large a proportion to the whole population as to threaten, without some conservative power, the entire extermination of the inhabitants. These and other fatal diseases not now known to us prevailed many times in succession, as yellow fever and cholera do in modern times, and as medical treatment was then scarcely practiced the number of recoveries was probably small; but, judging by analogy with later epidemics, the histories of which are better known, we may presume that some suffered less severely than others, and that the lives thus preserved gained a partial immunity from subsequent attacks, as in our fevers of the present time. Science, so busy now with other matters, attempts no explanation of epidemic influence, or of this positive or partial immunity from epidemic disease; but of the existence of both there can be no doubt.

The most destructive diseases, whether contagious or non-contagious, have always prevailed more or less as general epidemics, moving, with few exceptions, from the east westward, and we have no certain evidence that they have ever been arrested by human agency. Even small-pox, which is supposed to be communicated by contagion, is governed by the dynamic law of epidemics in spite of all efforts to control it, as at the present time, when an epidemic influence is manifestly prevailing. Whenever it becomes epidemic in the large cities of Europe we may expect it will in due time appear, like cholera and other epidemic diseases, in the large cities of this country, springing up in numerous localities without apparent cause. Predispositions to disease, caused by unwholesome living, tend to increase the mortality on the one side, while partial or positive immunity exercises a conservative influence on the other; but all observation shows that little reliance can be placed upon quarantine regulations to bar the progress of epidemic diseases of any kind. The perpetuation of this delusion, founded wholly upon negative testimony, promises to be continued, like that which required the Roman soothsayers to continue their observations for three hundred years after they became unable to look one another in the face without laughing. In the matter of reform, however, we have much to hope from the growing habit of independent thought and observation among the hardy practitioners of the West and South, who have better opportunities for correcting errors respecting contagion, decomposition, fermentation of vital fluids, and immunity from disease, than can be afforded in large cities and hospitals. Their intercourse with the eastern cities is never obstructed by quarantine, however rife the epidemic influence prevailing therein.

New York.

FAVUS ON A CAT PRODUCING RINGWORM ON THE HUMAN SUBJECT.

Reported to the State Medical Society of Kentucky, 1872.

BY L. P. YANDELL, JR., M. D.,
Professor of Materia Medica and of Clinical Medicine in the University of Louisville.

I was called, in March, to see the child of Mrs. M., aged ten years. Found upon head, neck, shoulder, and arms a dozen or twenty circular, oval, or crescent patches of tinea circinatus. Mrs. M. was impressed with the belief that her child's disease had come from a pet kitten upon whose body were a number of scabs. Within a week a similar eruption appeared upon Mrs. M., which still further convinced her that the disease was contagious, and had its origin in the cat. Strong carbolic acid was applied to the patches in both cases, which was followed by satisfactory cure. At the suggestion of Mrs. M. I examined the cat. Its belly presented a number of large favus crusts having the peculiar granular character, cup-shape, and pathognomonic odor. The crusts were not of so deep a yellow as I have seen in the human subject, but were rather of a cream color. Upon removing them a raw, inflamed, and depressed surface was presented. A portion of the favus crust from the cat was examined under the microscope by Dr. Kastenbine, and showed a most beautiful and distinctly-developed specimen of the achoreon schönleinii. I unfortunately failed to make a microscopic examination of the eruption on the child or mother.

Dr. Lowe, in the London Lancet, reports that a patch of favus under his care passed into tinea tonsurans, and he himself was at the same time attacked with herpes circinatus. Dr. Tilbury Fox says that pityriasis versicolor may be produced from tinea tonsurans. Dr. Draper, of New York, has recorded a case of a family attacked by favus communicated from a cat which had eaten mice affected with the disease. Dr. Tilbury Fox mentions two cases of favus in brothers who had slept together, and who had contracted the disease from "scabby" white mice. Dr. Lowe has met with parasitic plants upon brewers, which he believes were derived from the growing yeast. Erasmus Wilson totally denies the existence of any vegetable parasites upon the human skin. Hebra believes that favus, tinea circinatus, tinea tonsurans, pityriasis versicolor, sycosis, and the other vegetable parasites, are one and the same. Other dermatologists represent each as a distinct fungus. Dr. Tilbury Fox believes that in favus there is a peculiar blood state, a modification of the strumous diathesis, and that the different forms of vegetable parasites are due to peculiarities of soil, so to speak. The cure of these fungi is generally easily accomplished by attention to the general health, the use of baths and emollients to remove crusts and scales, and the application of parasiticides.

Favus is the most intractable of these affections, and for its cure innumerable remedies have been employed. Bichloride of mercury, two to five grains to the ounce of water, is a very favorite application. Carbolic acid, highly commended by some, is totally worthless according to Dr. McCall Anderson, who speaks well of sulphur, sulphurous acid, and hyposulphite of soda. Oil of cade is a favorite with the French. Sulphuret of lime, sulphuret of potash, sulphate of copper or iron, acetate of copper or lead, iodide of sulphur, calomel, turpentine, croton-oil, benzine, ointment of veratria, ammonial plaster, and the pitch cap, all have their advocates. Nearly all dermatographers insist upon the necessity of epilation. Unfortunately "remedies" for favus are more abundant than cures. The size of the army of favuscides is well matched by the host of names applied to favus.

My own experience has led me to believe that favus, pityriasis versicolor, tinea tonsurans, and herpes circinatus (both of which last are the common ringworm) are stages or varieties of one affection, and are indubitably contagious. Favus, I think, is only found in strumous persons. Carbolic acid has long been my favorite parasiticide, but bichloride of mercury seems equally efficacious, and on several accounts is preferable.

LOUISVILLE.

UNSUCCESSFUL OPERATION FOR DEFORMITY AFTER FRACTURE OF THE FEMUR.

BY DAVID PRINCE, M. D.

I am the more willing to report this case because we learn more from our failures than from our successes; and the mindfulness of failures, such as the following case, helps toward caution in our undertakings.

In this case the operation was made at the end of four months from the date of the injury. According to T. K. Hornedge,* Skey operated by extension for deformed union of the bones of the leg, in a boy aged fifteen, thirteen months after the fracture. He divided the tendo Achillis, but failed to restore the length by three fourths of an inch.

The prostration or collapse attending the case here reported is peculiar in this, that it did not manifest itself immediately, but came on after the lapse of a day. Hemorrhage might be suspected as a cause of the collapse if it had been more abundant; but being only sufficient in twenty-four hours to saturate a small towel placed under the limb, this cause seems insufficient to explain the result. A remark of W. S. Savory comes to our aid, without, however, giving us any light upon the practical questions *when* and *why:* "In some cases injuries or operations, comparatively trivial in their nature, induce a condition of unaccountable debility, and terminate in death by asthenia."*

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* Holmes's Surgery, Vol. I., page 808.

J. W. N., aged sixteen, well grown and healthy (red hair), received, about the 1st of December, 1871, an oblique fracture of the right femur, in the upper part of the lower half, from above and behind downward and forward, the obliquity being supposed to be about three inches in the length of the femur.

The treatment was executed by Drs. K. and F., of S., in accordance with what was claimed to be the recommendation of Dr. Scudder, of Cincinnati, of whom one of the practitioners had been a pupil. No extension was applied. The splints were kept on twenty-two days, and no retentive appliance was worn afterward.

March 1st. At the present time there is a shortening of three inches, measuring from the superior anterior spinous process to the internal malleolus. A portion of this shortening is owing to a very marked curvature outward of the middle third of the femur. The union is firm and altogether unyielding by any ordinary force. The obliquity given to the leg by the curvature of the thigh occasions a very awkward gait, which is not much improved by a high heel upon the patient's boot. It was resolved to attempt a removal or amelioration of the deformity.

March 2d, a cathartic having been taken the day before, and chloroform anæsthesia being complete, Jarvis's adjuster was applied for extension; and the leg being flexed upon the thigh, and the patient placed upon his face, lateral force was applied by lifting upon the leg for extension, with the foot of the operator upon the thigh for counter-extension. The adjuster was tightened at the same time, in order to act upon the curvature by a direct pull at the same time with the application of the lateral force. These means were found to be insufficient, and resort was had to division of the callus by means of a chisel. A drill was first introduced from below upward, on the anterior aspect, as a guide for the chisel, half an inch broad, which was made to follow. This was driven to the center of the fracture, and force was then again applied as before, without success. The drill was next introduced from above downward and forward, followed by the chisel, a sufficient distance to meet the division made by the instrument from below. After this the refracture was effected by a reäpplication of the lateral force. There was not sufficient hemorrhage to make it supposed to be necessary to explore the wound to find any vessel. Some degree of oozing of blood continued, however, from the posterior wound until it was plugged with cotton, saturated with tincture of chloride of iron, on the third day. The shortening, after the femur became straight, was reduced to one inch and a half, showing that one half the shortening had been made by the curvature. An appliance for extension by means of a weight and cord running over a pulley was made, with the expectation of overcoming the inch-and-a-half shortening. The patient recovered from the effects of chloroform without any unusual appearance of depression.

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* Holmes's Surgery, Vol. I., page 713.

March 3d, become restless about two A. M., and took one third of a grain of morphia sulphate and one scruple of chloral hydrate. Appeared very well at the time of reärranging the apparatus, at nine A. M.; pulse not examined. In the afternoon he had delirium and a frequent pulse. The thirst and vomiting which had been troublesome disappeared with the accession of collapse. Pulse 120, small and weak.

March 4th, at eleven P. M., spiritus frumenti, one ounce; two A. M., ditto; seven A. M., ditto; at nine A. M. and twelve M., one half ounce. Milk taken is thrown up coagulated. Beef-tea is also vomited. At two P. M. some reäction, and beef-tea is kept down. Depression and loss of intelligence came on again at six P. M. The urine is drawn by a catheter three times a day throughout the case.

March 5th, eight A. M. rational, and asks for what he wishes. Spiritus frumenti, one half ounce, and morphia, one sixth of a grain; at twelve M., ditto. Slept most of the morning. At nine P. M. continues rational; pulse soft and more full; respirations deep and easy, after having been short and of little depth. Four grains of quinine were given, followed by aggravation of symptoms. Had a sinking spell in the night, for which he took spiritus frumenti, one half ounce, and morphia, one sixth of a grain, at two A. M.

March 6th, the general appearance unchanged. Does not complain of any pain, and has not at any time since the operation. Color of skin good; tongue slightly dry; pulse averages 120; sleeps most of the time. During the waking periods he is sometimes rational and sometimes not. The extension is kept up by the weight of three bricks, and no complaint is made of it. At eight A. M., spiritus frumenti, one half ounce, and morphia, one sixth of a grain.

March 7th, pulse 140, distinct and easily counted after having passed a quiet night. Spiritus frumenti, in half-ounce doses, amounting to two ounces, and sulphate of morphia, in one-sixth-grain doses, amounting to one half grain; beef-tea and a portion of a soft-boiled egg at noon; milk punch in afternoon.

March 8th, pulse 120, soft and distinct; spells of wildness and restlessness; drinks milk punch with avidity; has taken three soft-boiled eggs. Spiritus frumenti, three ounces, and morphia, one half grain, in the doses above named. A liquid alvine evacuation obtained by fluid extract senna, two drachms, and two injections. The plug drawn from the posterior wound was followed by a free, thin, and offensive discharge.

March 9th, general depression. Died at three P. M. No post-mortem examination.

JACKSONVILLE, ILL.

Reviews.

Animal and Vegetable Parasites of the Human Skin and Hair. By B. Joy Jeffries, A. M., M. D., etc., etc. Boston: Alexander Moore. 1872.

The fecundity of Dr. Jeffries in authorship is something remarkable. The rapidity with which he produces books reminds one of the productive powers of the little parasites so graphically described in the work before us. His "Eye in Health and Disease" was scarcely opened to the profession ere his "Recent Advances in the Pathology and Treatment of Skin Diseases" appeared, and before this is cold from the press he sends forth "Animal and Vegetable Parasites of the Skin and Hair." Nor does he propose to stop here; for we find in the publisher's advertisement that "Leprosy of the Bible and its Present Existence in the World" is in preparation by the same author.

Though the hypercritical may cavil at Dr. Jeffries for multiplying books so rapidly, and especially after his recent unmerciful slashing of dermatographers generally for the same thing in his Prize Essay, we have no fault to find with him on this score; for his books will find readers, and every reader will be benefited by their perusal.

The present work is especially intended for the laity, and the author frequently advises his readers cutaneously afflicted to "consult some physician who pays special attention to skin diseases." Traveling and advertising quacks are earnestly and repeatedly warned against. "It is very true that there are enough medical men who do not advertise and yet are arrant quacks; but it is still truer that all those who do so in any form are sure to be impostors, who live and grow rich by fleecing the credulous," says Dr. Jeffries. But here we think the author goes too far. Such indeed is the cry of certain virulently ethical doctors who are engaged neither in teaching nor writing, and who declare medical schools, and medical journals, and medical books to be mere advertising engines, and who likewise bitterly oppose the popularizing of medical knowledge lest every man should become his own physician and throw doctors to the dogs; but we hold that such books as Dr. Jeffries has given to the public are a justifiable mode of advertisement (for certainly they are advertisements), since the Code of Ethics bids us hide our light under a bushel because it is the "common practice of quacks and charlatans" to call attention to themselves in the secular press. Surely there is no danger that the public shall ever become so learned in medicine as to dispense with medical advisers; and he who enlightens the public mind upon disease and therapeutics benefits his race without detriment to the doctor. Legitimate medicine is not endangered by a free and honest avowal of it secrets. It is only quackery which can thus be injured by exposure. Dr. Jeffries's books are none the less valuable to the medical practitioner because they are within the comprehension of all intelligent men and women, and we regret that Dr. Jeffries's simple style is not more generally adopted by medical writers. We will remark, in passing, that we are pleased to find him adopting the term *client* instead of *patron* as applied to our patients.

The first parasite discussed by our author is the pediculus, and the natural history of its three varieties, pediculus capitis, pediculus corporis, and pediculus pubis, is vividly set forth. The pediculus is "livid pale, or gray, and is said to change with the color of the hair." We have certainly observed lice of a glossy black color upon the heads of negroes. The louse lays fifty eggs, which hatch in six days; and in eighteen days the young louse begins to lay. The crab-louse is not, like the head-louse or body-louse, swift of foot; but is inactive, like the sloth, and spends his life holding close to the root of a hair by means of his powerful claws. The different varieties of this parasite are stated never to interfere with each other. Each dwells in his own territory and among his own people. Thus pediculus capitis confines himself to the scalp; pediculus pubis inhabits the hairs of the body, the whiskers, and even the eyebrows and eyelashes; while the pediculus corporis secretes himself in the folds and seams of the clothing, only going upon the body to forage. All feed upon human blood, and men of all nations are infested by them. Their dried eggs have been found in the hair of mummies.

According to Aristotle, the poet Alcmanes and the Syrian Pherecydes died of louse disease. The pediculus is likewise charged by history with the death of Herod, Sylla, Plato, and Philip II. It would seem that the ancients regarded phtheiriasis, or louse disease, as rather an honorable malady, and it was quite the custom for the friends and biographers of noted personages to attribute their demise to this cause. We have learned in our day that lice are a consequence and not a cause of depraved health, and that their chief source is want of personal cleanliness. Eczema and some other skin affections may be produced by these vermin.

The pediculicides enumerated are sulphur, mercury, the seeds of stavesacre and savadilla, pellitory root, the essential oils, and alcohol; mercury standing at the head of the list. The German "schmierseife," or smearing soap, is highly commended for the destruction of the eggs of parasites. This is the "savon noir" of the French and "soft soap" of America. Dr. Jeffries says that in the many thousand recruits examined by him prior to their enlistment in the United States army, during the late civil war, he found the pediculus so frequently present that he would not like to mention what proportion of the men were thus infested. Our own extensive observations of recruits in the southern armies, we take pleasure in remarking, were not rewarded with equal discoveries in this line. It was only after our men had mingled with those of the North upon the battle-fields, or had enjoyed the hospitalities of their prisons, that the "grayback," as he was denominated by the soldiers, appeared abundantly in the Confederate camp. Be this, however, as it may, as the war is over and all of us are again friends, we shall not dispute about the relative abundance of this classical nuisance in the two armies.

The only important fact concerning the louse not mentioned by Dr. Jeffries is his employment as a courser by the Mexicans, the louse-race being a favorite sport in that sunny clime.

The acarus scabiei, the next most important animal parasite, is exhaustively discussed, and its history given from its cradle to its grave. Like the other parasites, Dr. Jeffries holds it to be older than man; and when "men began to people the earth the itch mite," he thinks, "began to people them;" a reflection upon our first parents which we do not recollect to have heard of before. Aristotle was acquainted with the itch, it is believed; but St. Hildegarde, Lady Superior to the Convent of Ruperts Berg on the Rhine, in the twelfth century, makes the first indisputable reference to the itch mite. Strange to say, there are those at the present day who deny its existence; but we must believe, with our author, that they do so for the sake of notoriety. In 1834 the Parisians began to teach the world how to find this parasite. The female of the acarus and pediculus, like the female eagle and other birds of prey, is larger, more powerful, and more active than the male.

The acarus scabiei, says the author, has been found in the horse, sheep, llama, ferret, lion, and ape; it is also found in the dog, and is the cause of one form of "mange." This parasite moults three times. It lays fifty eggs, which hatch within seven days. After ovification it dies. Army itch, as it is called, is due to the acarus scabiei, and is ordinarily the itch complicated by eczema, impetigo, etc.

Dr. Jeffries enumerates the usual remedies for scabies, but places sulphur ointment above all others. Soaking thoroughly in warm water and free use of strong soap, followed by sulphur inunctions, we agree with Dr. Jeffries, is a certain cure for scabies.

According to Dr. Jeffries, the eggs of the bot-fly may live upon the skin and form boils. Fleas, flies, and stinging insects are treated of. The sand flea is spoken of as peculiar to South America. In some places along our southern coast this pest is abundant. The acarus folliculorum, or pimple mite of acne, he thinks may cause acne. Such is not, however, the prevailing opinion among dermatologists.

Speaking of the vegetable parasites, Dr. Jeffries grows eloquent. Their existence was demonstrated in 1840, and "from that time to the present," says he, "scientific physicians and surgeons have steadily and constantly been sweeping the fields with their microscopes as the astronomers have swept the starry fields with their telescopes; and thus, from the efforts and studies of a large number of trained, intelligent, and laborious observers, the atoms of light in the heavens, and the atoms of animal and vegetable life on and in our planet and its inhabitants, have revealed new worlds of existence to us." His favorite parasiticide in all the vegetable fungi is bichloride of mercury, two grains to an ounce of water, to be applied after the skin has been thoroughly cleaned by soap and water. We find this application very efficacious in pityriasis versicolor.

Vegetable parasites are sometimes communicated from the lower animals to man, and the following has been observed, says Dr. Jeffries: "A rat or mouse gets a vegetable fungus upon its skin or hair. This is communicated to the cat; from the cat the child takes it, and from the child the parents and others acquire it." *

Dr. Kuchenmeister's interesting report on the "False Para-

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* We report a case in point in the present number of this journal.

sites of the Human Body" is quoted *in extenso* in this work. Experiment has proved that none of the amphibiæ can endure a moist heat of 80° F. longer than two to four hours; thus demonstrating the fallacy of the popular absurdity that frogs, lizards, etc., may exist in the human stomach. Leeches are said to have lived some time in the stomach, causing dangerous hemorrhages. Such is Baron Larrey's statement. Caterpillars, swallowed in salads, fruits, fats, etc., have been found in fæces and vomited matter, and, according to Linne, are very dangerous in the human intestines.

The bombyx processionea, or processionary caterpillar, is stated by Kuchenmeister to be very dangerous to man and other animals. By means of a dust coming from them, and which is either a peculiar secretion of the caterpillar or their minute hairs, ophthalmia with perforation of the cornea, erythema of the eyelids, inflammation of the throat and lungs, violent itching, scalding skin eruptions, ulcers, and general fever are said to have been caused in men, horses, sheep, etc. These maladies may arise from frequenting forests where the processionary caterpillar exists, or in gathering fruits, leaves, etc., in the haunts of this insect. The habits and manners of the caterpillar are exceedingly curious and interesting.

We heartily recommend this little volume to our readers as abounding in matter at once curious and instructive. It concerns every reader to know something about the matters whereof it treats. L. P. Y., JR.

An Address before the Waco Medical Association. By R. Wallace, A. M., M. D., retiring President, and President of the State Medical Assocition of Texas.

Dr. Wallace, among some good thoughts well expressed as to the character, dignity, and duties of the profession, indulges in intemperate denunciation of our medical colleges, as witness such language as this: they "are deluging society with ignorant, conceited, diplomaed knaves;" "the medical colleges of the United States have done more in lowering the standard of information within the profession, and debauching public opinion without, than all other instrumentalities combined," etc. Now all this is very severe, though it would be well for one who criticises ignorance to avoid the use of a word which has not and ought not to have any existence, and also not to make information synonymous with education. But is it true? Strike from our American medical literature everything written by medical teachers, and nine tenths of that literature is gone. Nor does our knowledge of medical students, derived from eight years spent in teaching them, during which time we have known some twelve hundred, lead us to believe them ignorant and conceited knaves. Doubtless medical colleges have great faults, but such wholesale condemnation is neither charitable nor just. If medical gentlemen are so sorely distressed over the derelictions and transgressions of the colleges, let them see to it that they themselves send no incompetent, no half-qualified, or utterly unqualified students to them. A reform commenced in the offices of private physicians would put an end to, or at least greatly lessen, the evil against which, much exaggerated as we believe, Dr. Wallace so severely inveighs. The medical colleges might well say to some medical preceptors, We will make you silk purses and whistles, but not out of sows' ears and pigs' tails. T. P.

Recollections of Past Life. By Sir HENRY HOLLAND, Bart., M. D., F. R. S., D. C. L., etc., etc. New York: D. Appleton & Co. 1872.

In this pleasing little volume, written by an octogenarian who is as full of honors as he is of years, we have the retrospect of a most remarkable life; remarkable for its serenity, for its dignity, its elevation, its great length, and its prosperity.

It is not often that we are permitted to record a life that has stretched beyond fourscore years. It is more seldom that we meet with powers of mind and body well preserved in one so extended, and it is rarer still to encounter one marked by the unvarying prosperity which has signalized the life of the subject of these "Recollections." The author is in his eighty-fourth year, and yet he tells us, in these memoirs, that he still walks rapidly and without a staff; and his style has lost none of the force that marked it when, nearly forty years ago, he penned the "Notes and Reflections" which have given him character in all countries where scientific medicine is cultivated. Fortunate in his birth every way, he has been favored in all the circumstances of his subsequent life, which, but for the loss of those endeared to him by ties of family and friendship, inevitable as time goes on, has been, as he tells us, "untouched up to this moment by any serious misfortune."

Sir Henry Holland was born at Knutsford, in Cheshire, England, October 27, 1788. Of his father we learn but little from the volume before us; but he was evidently a man of cultivation and liberal views, as well as of wealth enough to secure his son all the advantages of education and society in his youth. Of his paternal grandfather he says: "His was an admirable example of old age rendered venerable by all the gentler qualities of human nature. He was the most perfect practical optimist I have ever known. Living on and farming his own land, he put to shame the many sayings, ancient and modern, as to the querulous nature of the agricultural mind. He never could be got to complain of the change or 'distemperature of the seasons.' If a particular season was quoted to him as bad for one crop, he always vindicated it as good for another."

He was sent for a year or two to a private school in his native town, "learning as much perhaps as such schools generally teach, but this very little." In his eleventh year he went to Newcastle-on-Tyne, and studied four years under the care of Rev. W. Turner. After this he went for a year to the school of Dr. Estlin, near Bristol, where he had for a classmate Richard Bright, so noted in our profession, and where, he says, he gained more classical knowledge than at Newcastle, but still very little of that exact scholarship which is reached (with disputed advantage) at the public schools of England. At sixteen he became an articled clerk in a great Liverpool house, with the privilege of passing two sessions at the Glasgow University in furtherance of his general education. These winters decided the course of his future life; for at the close of the second session he had become convinced of his error in the choice of a profession, and obtained a release from the articles which bound him to a merchant's desk.

In 1806, when exactly eighteen years old, he went to Edinburgh to study medicine. After the three required sessions, with the intervention of two winters in the London hospital schools, he took his degree in 1811. In Guy's and Saint Thomas's Hospitals, and in the Edinburgh schools, he says: "I went through the accustomed routine of lectures, demonstrations, clinical practice, and the less profitable teaching of books; learning at a later period, for it requires time for the lesson, that actual experience, with a sense of responsibility attached to it, is the sole school in which to make a good physician." And he adds in this connection: "One of the most learned men I ever knew in the literature of medicine, as well as in physical science, was one of the worst practitioners; borrowing his diagnosis from books, and not from that happier faculty, almost an instinct, which enables some men to interpret and act upon signs which no book can describe."

For the subject of his thesis, which, according to the fashion of the times, was written in Latin, he took the "Diseases of Iceland," a subject on which a stay of four months on that island had qualified him to write. At the time of taking his degree three years were yet wanting of the age required for admission to the College of Physicians in London. A year of this interval he spent traveling in Greece and Turkey. Returning to London, his time was divided between study and society, in which he was introduced to the most noted men and women of the day, of which it is sufficient to mention the names of Lord Byron, Sir James Mackintosh, Rogers, Sir Humphrey Davy, and Madame de Staël, of whom he gives graphic sketches in his "Recollections." Toward the close of his probation he was requested to attend Her Royal Highness, the Princess of Wales, as physician during the first year of her residence on the Continent. Ten months he passed in that relation, seeing all that was remarkable in the society, libraries, and scenery of Italy; and he made yet another tour before beginning his London professional life to France, Belgium, and Holland.

In January, 1816, he entered on his professional life in London at the age of twenty-seven, and with an augury of success, as he remarks, speedily and completely fulfilled. Inheriting wealth, and with it health and the happy disposition to look on the bright side of things, life with him has been a "battle" only in name. Up to the time of entering upon his profession he had never known what it was to want money, and in a little while his income from that source exceeded his expenditure. Through his long, busy life he has been nearly free from quarrel or controversy, only one occurring to him as he looks back over it, and that of slight import and speedily put to rest. At the outset he resolved that while faithfully devoting himself to his profession he would never become a slave to it, and that he would "keep his practice within £5,000 a year;" a limit, he adds, which, while closely approaching it, he has never actually exceeded.

A love of travel, with which he was moved from his earliest years, continued to be indulged after he commenced practice, notwithstanding the warnings of his friends that it would mar his success; and annually, as regularly as autumn came round, he has been found, for fifty-five years, far away from London and the worry of business. These excursions have hardly ever extended beyond two months; but nothing in all the long period of his professional career has ever interrupted them; and he has experienced, as he declares, no loss of practice from the recreation. This fortunate issue is due partly to the circumstance that a large proportion of his practice is among people who are absent themselves from town at the season when he is on his travels; but what was an innovation when he commenced it has become the usage of the profession in London, and physicians now claim the right to breathe once a year a little fresh country-air. It is a happy innovation, tending to lengthen life and render it brighter and more comfortable. We see physicians breaking down in middle life under an overwhelming practice, and contrast their condition with that of this London practitioner, who at fourscore and upward is still hale, vivid, genial, cheerful, fitted for mental labor, and ready for the longest journeys. They groan under their self-imposed toil and look for sympathy. For ourselves, we feel like returning them the answer of Dan, in the Irish legend, to the soaring eagle that had snatched him away unceremoniously, and then, finding him heavy, began to complain of the burden, "*My dear fellow, who axed you?*"

> "I have," says the author of these recollections, "even from an early age, traveled much and lived much in society; but I have never allowed these collateral interests to interfere with the objects or duties of my profession; and, by what I regard as a singular happiness, I have been enabled so to combine these conditions that nothing has been forfeited by their conjunction."

His travels collectively, he computes, have made up more than twelve years of his life. In the course of them he has been twice to Iceland, first in 1810 and again in 1871; has visited, and most of them repeatedly, every single capital of

Europe; has made eight voyages to the United States and Canada, traveling over more than twenty-six thousand miles of the American continent; one voyage to Jamaica and other West Indian Islands; has been four times in the East, visiting Damascus, Jerusalem, Cairo, and Constantinople; has made three tours in Algeria, two journeys in Russia, several in Sweden and Norway, repeated visits to Spain, Portugal, and Italy, and voyages to the Canary Isles, Madeira, and Dalmatia, "and other excursions which it would be tedious to enumerate." In his last voyage to the United States, made when on the verge of his eighty-second year, he traveled, in five weeks, three thousand five hundred miles by land, lake, and river, and almost without fatigue. In all his travels he has never met with a serious accident, but has had some narrow escapes from violent death. Once he was threatened with shipwreck, once he was near falling into the hands of pirates, once he came nigh perishing in a snow-storm while crossing the chain of Mount Othrys, and once, as he was descending a mountain in Iceland in company with his friend, Dr. Bright, he was about falling through the slender and fragile snow-arch that spanned a crevasse, and was only saved from instant destruction by the snow-poles of his two guides.

He has never known what seasickness is. His hours of greatest physical comfort are those passed on the ocean; and his voyages have been so profitable for study that many of the elaborate articles prepared by him for the Quarterly and Edinburgh Reviews have been written at sea. When traveling he has sought, he says, to divest himself as far as possible of the name and character of physician, but this he could not always do; and he mentions two exceptions which occurred in the East, once when he rendered medical aid during the prevalence of a malignant fever on the coasts of the Black Sea, and again when he was requested to prescribe for the daughter of Mehemet Ali, "without the privilege even of seeing the Egyptian princess whom he was expected to cure, and upon the report of an Italian physician who himself knew little of the case and feared to prescribe for it." He had private information that the patient was of indolent and gluttonous habits, and his advice had reference to such a mode of life. He conjectures that it was therefore not acceptable to the young lady, and probably not very closely followed. He continues on this subject:

> "My visits to the United States have brought to me patients of very different stamp, to whom it was a pleasant office to render aid as some partial return for the many and warm kindnesses I have received in that country. Such aid, however, is really little needed where both the principles and practice of medicine are derived from schools of instruction and a medical literature in nowise inferior to our own."

In another particular Sir Henry Holland has disregarded the admonition of his friends with impunity:

> "It was told me, and told very truly as a general fact, that there was danger to a young physician in gaining other repute than that belonging strictly to his profession; that the suspicion of literary tastes, or even of devotion to other parts of physical science, was taken as of evil augury for his medical ability. More than one instance indeed has occurred to my own knowledge of failure, owing presumably to this cause where all other circumstances promised success."

In this connection he relates an instance which, absurd as it may appear, is probably not by any means a solitary one in human experience. A man of the highest political rank, he says, when remonstrated with by his family for employing a particular physician, pleaded in reply that "Dr. —— was so ignorant of everything else that he could not be otherwise than profound in medicine."

Notwithstanding these prejudices, he has continued through life to indulge his literary tastes, as well as his love of travel, without detriment to his practice. The recreation of travel, he believes, has had much to do in maintaining the excellent health which he still enjoys, and in his classical studies he has found a source of ever-increasing enjoyment. While writing these recollections, and in his eighty-third year, he finished his third reading of the "Odyssey," and, as he declares, "under the feeling of augmented pleasure." He has been able to keep up these studies, in the midst of a busy professional life, by adhering firmly to a resolution, early formed, of devoting a part, if only a few minutes, of three days in every week to Greek and Latin reading; and, carrying his classics with him in his carriage, he has found no difficulty in passing from "the sorrows of Iphigenia or Dido" to the plaints of his patients. But his patients have been, as a rule, of no ordinary type. In large proportion they have belonged to a class and been troubled with maladies best relieved by the wit of Horace or some apt quotations from Catullus or Lucretius. Few of us have the same incentive to pursue our classical studies.

Sir Henry Holland has never been connected with any of the hospitals of London. This probably is in part the explanation of the fact that, while he has been an industrious writer, he has not written largely on medicine. His "Notes and Reflections," already alluded to, is a work of singular excellence. It shows a mind at once acute and observant, and stored with the results of experience, as well as disciplined by laborious culture. Many of the views set forth in it were quite in advance of the accepted doctrines of the time when it appeared. We can not recall a work relating to medicine, written thirty years ago, to which we return with so much pleasure, or one indeed of any date which abounds more in common sense, sound principles of practice, and true medical philosophy.

We have spoken of the happy auspices under which our author began his career, and of the good fortune which has attended him at every turn of his life. Looking back over it as it draws toward the close, and recounting among its many happy circumstances "the liberality of an excellent father," his exemption from quarrel and from pecuniary cares, and his mental and bodily activity so long preserved, he mentions, what may well rank higher in the scale of human blessings even than these, that "his children have never been other than a source of satisfaction and happiness to him." But, inestimable as these blessings are—and certainly they are above price—they can hardly be reckoned above that "constant feeling of good-will to all" which appears on every page of his memoirs, and has made his life one of unvarying sunshine. In his numerous travels, and during his long professional career, he has been brought into close contact with a vast number of people, and with very many, of all professions and every rank in life, he has lived on terms of intimacy; but of the multitudes of men and women whose names he mentions—physicians, lawyers, statesmen, lords, kings, poets, philosophers—only two or three are spoken of in terms of severity. One of these is Ali Pasha, who desired to learn of him how he might poison his enemies in the surest way and with the greatest secrecy; another is Sir John Leech, whose influence with George IV. determined, as he believes, the trial of Queen Caroline.

It is very pleasant to the mind, amid the strife and turmoil in which so many of us are doomed to spend our days, to contemplate such a character and a life so tranquil, so prosperous, so serene as we have here depicted before us in these "Recollections," and we quit the subject with reluctance. But we must check our pen, which perhaps has already run on to too great a length for the patience of our readers, who, we are too well aware, will not be able to form any just conception of the charm of this little volume from our imperfect notice.

Readers there may be who will find it tedious; critics, to whom it will seem garrulous, and who will fancy that they detect in it some traces of the footprints of time. We find in it nothing of the sort. Its perusal to us has been a delight.

Its style, its tone, the narrative and retrospect, all are charming. Whatever flaws may mark it, they are so small in comparison with its merits that we willingly close our eyes to them. We are most reluctant, we confess, to see any faults at all in an author so unwilling as the writer of these memoirs has shown himself to find fault with others.

Memoranda on Poisons. By the late THOS. HAWKES TANNER, M. D., F. L. S. Third and completely revised edition. Philadelphia: Lindsay & Blakiston. 1872.

The purpose of these memoranda is to refresh the memory of the practitioner on the subject of poisons, and to enable him to see at a glance the treatment to be adopted in such cases of poisoning as he is called on to manage. The work is equally adapted to the wants of the student, and is worthy to be on the table of every one who is either studying to become or is already a physician.

Clinic of the Month.

Treatment of Membranous Dysmenorrhœa. — In the *Archives Générales*, April, 1872, there is the concluding number of a series of articles entitled *Contribution to the Study of Membranous Dysmenorrhœa.* Of that portion devoted to the therapeutics of this very intractable disorder we shall present a condensed translation.

The therapeutic indications may be divided into *causal* and *symptomatic.*

1. *Causal indications.* It is, in the first place, necessary to remove all causes that may augment the inflammatory phenomena or cause an excessive functional activity of the utero-ovarian organs. Thus it is necessary to enjoin only moderate exercise, general and local rest; by the latter, rest for the diseased organ, being meant directing, so far as possible, more or less complete abstinence from sexual intercourse. Excessive sexual indulgence is often an aggravating if not an exciting cause of the disorder. Where the patient is single, and the physician is consulted as to a proposed marriage, he ought to advise its postponement. If a patient is robust, local depletion should be used in the intermenstrual period; this depletion being by scarifying the cervix, or by leeches applied to it, or else to the inguinal region just at the emergence of the veins of the canal of Nuck. Scanzoni, who advises antiphlogistic treatment, also employs wet cups to the lumbar and sacral regions. Constipation should be carefully prevented by gentle enemata or by laxatives, such as cream of tartar, avoiding all drastic purgatives. Graily Hewitt, who

directs warm hip-baths during the menstrual periods, advises justly frequent cold vaginal douches in the intervals.

If the patient is too feeble to bear even local depletion, revulsives or mercurials (the latter have been very successful in the hands of the English, especially Oldham and Ashwell) may be used. Nevertheless it should be borne in mind that all these different means generally fail to prevent the periodical production of the dysmenorrhœal membranes; and hence all gynecologists seek to modify the uterine mucous membrane by cauterizations or by intraüterine injections. Cauterizations of the cervix or of the cervical canal are not sufficient. The caustic must be applied directly to the lining membrane of the uterine cavity, and such cauterization may be readily made after having first dilated the canal. Many physicians leave the crayon of nitrate of silver to dissolve within the womb; but this practice should be unequivocally condemned, for Nonat has shown that it may produce contraction and even closure of the internal os. Dr. Mandl, in Germany, more prudently uses a crayon of chlorate of potassa, which certainly is very useful for its alterative influence upon mucous surfaces. Scanzoni, after using nitrate of silver, finally renounced it because in several cases it produced acute inflammation. Siredey succeeded in curing two cases of membranous dysmenorrhœa with nitrate of silver. In the second he used also crayons of tannin, which were allowed to remain within the uterus.

Intraüterine injections, if used at all, should be used with the greatest caution, as they may cause serious and even fatal consequences. Generally such accidents may be attributed to the too great violence or the too great quantity of the injection. To avoid the latter error it is best to inject first a definite quantity of warm water. These injections may be of nitrate of silver, of iodo-tannin, of rhatany and poppy, of persulphate of iron, or of the potassio-tartrate or of the perchloride of iron—the last being chosen in cases where metrorrhagia results from the apoplectic destruction of the mucous membrane—warm water, or glycerine may be useful, especially if the uterine disease is acute or subacute.

2. *Symptomatic indications.* The pains which membranous dysmenorrhœa causes are generally so intense that the patients beg for immediate relief, and the treatment requisite is both *external* and *internal.* As to the former the means may be, when the flow is small and difficult, the application of cataplasms or of dry, warm flannels upon the loins and hypogastrium; inunctions, emollient and narcotic fomentations, vaginal injections of marsh-mallow and poppy, to which laudanum is added, rectal narcotic injections, hip-bath, general bath, etc., which sometimes succeed in other dysmenorrhœal maladies, may sometimes calm the sufferings, which are so severe as to demand prompt intervention. Hypodermic injections of muriate of morphia, the application of chloroform over the pubes, vaginal injections of carbonic acid, ether and chloroform spray upon the hypogastric and ovarian regions, may also greatly relieve the pain.

Nevertheless it ought to be stated that all these means most frequently fail, the patients suffering terribly in this *catamenial accouchement;* this agony oftenest arising from the difficulty of the membranous product engaging in the cervical canal, the internal orifice of which is lessened either from spasmodic or from organic contraction. Such cases should be treated by tents, either of sponge or sea-tangle. Siredey narrates a case cured by gradual and progressive dilatation; Tyler Smith one in which the painful symptoms were notably diminished by the introduction of a silver canula into the contracted canal. Gradual dilatation by tents is to be preferred to abrupt and rapid, as effected by metallic sounds.

Often this dilatation fails, or indeed is impossible, in consequence of the almost complete impermeability or smallness of the external orifice. In such a case incisions may be resorted to. Dr. Emmet has recently published a very interesting paper in which are found evidences of the good effects of this treatment, so often practiced by Sims, in a large number of cases of dysmenorrhœa which he regarded as mechanical. Finally, the application of belladonna directly to the neck of the uterus, or the injection into it by the hypodermic method, of a solution of atropia may assist dilatation.

Internal medication comprises all substances which may calm the pain by hypnotic action, or even by an elective action upon the uterine apparatus. The narcotics—opium, morphia, chloroform, and chlorodyne—act as anodynes. Among the remedies which seem to act directly upon the uteroövarian system we mention *conicine* and the different preparations of conium, which Bernutz has so well designated *the opium of the genital organs;* hyoscyamus, bromide of potassium, the tincture of guaiac, so highly commended by Dewees and Rigby; apiol, Indian hemp, which Churchill states not only relieves the pain, but lessens the flow. The ammoniacal preparations are useful. Delioux regards the acetate of ammonia not only as lessening pain, but also lessening the flow of blood to the uterus. According to him, the preparations of ammonia also render the blood more fluid, and are antispasmodic. Among other agents that may be employed concurrently we mention the salts of soda, and especially those of potash, etc.

As to general treatment, this should be determined by the constitution and condition of the patient. Often she will be found chlorotic or anæmic, or affected with scrofulosis, hysteria, etc. Tonics, reconstitutants, and a good regimen would be useful in chlorosis and anæmia. The preparations of iron, which favor uterine congestion and hemorrhage, may be advantageously replaced by those of manganese and of arsenic. Cod-liver oil and iodine are among the remedies to be used in the scrofulous. Nervous and hysteric disturbance should be treated by valerian, oxide of zinc, ether, castor, etc., and by hydrotherapy. Mineral waters containing the alkaline carbonates may be useful in some cases of membranous dysmenorrhœa. Those containing sulphur would be of value in the chronic form of the disorder. Sea-bathing is injurious rather than beneficial, and should not be advised.

ABDOMINAL ANEURISM CURED BY COMPRESSION OF THE AORTA.—Dr. Moxon and Mr. Durham, of Guy's Hospital, London, report in the Lancet this case. The patient, male, twenty-seven years old, with an abdominal aneurism perceptible to the eye as well as to the touch. He was kept on low diet and at rest for eleven days; then, being put under chloroform, the aorta was compressed on the proximal side by means of Lister's abdominal tourniquet. The lower extremities were wrapped in cotton, and hot-water bottles placed in the bed. Compression was kept up for ten hours and a half, anæsthesia being continued during this time. Upon the removal of the tourniquet no pulsation in the aneurism or in the femorals, though afterward this temporarily returned; but at the end of a little more than a month it had entirely ceased. The case is especially interesting as being only the second one in which this plan of treatment has been successful; a plan which is advised "in all cases of abdominal aneurism in which it may be found practicable to compress the aorta on the proximal side of the aneurism in such way and to such an extent as to arrest its pulsation, and at the same time without the exercise of such force as might seriously damage the viscera or other internal parts."

INDIAN HEMP FOR SICK-HEADACHE.—Dr. Murray, of the Middlesex Hospital, advises the tincture of Indian hemp, in ten-minim doses three times a day, in the treatment of sick-headache.

CHLORAL IN CERTAIN DISEASES OF THE CHEST.—Dr. Waters (Lancet) finds chloral valuable in bronchitis, especially when complicated with emphysema, for its hypnotic properties.

Opium can not be used, for it checks expectoration and increases the liability to death from apnœa. Twenty grains of chloral is the usual dose required for this purpose. This remedy is also useful in allaying cough in chronic or in subacute bronchitis. Give four or five-grain doses in tincture of orange-peel or in syrup of tolu. It is useful again in procuring sleep in cases of asthma, both of the purely spasmodic kind and when complicated with emphysema of the lungs. In phthisis it may be used to procure sleep where morphia or opium in any form is not tolerated. It often fails to give any relief to the cough in pleuritic effusion, acute pneumonia, and in pericarditis. It should not be given in heart disease when there is albuminuria. There is a risk in giving it in cases of chronic alcoholism; it is apt to produce excitement. So too if the patient smokes much, as well as drinks freely, the probability of excitement following its exhibition is increased. Chloral, when taken habitually for a long time, has a depressing effect upon the heart. "It sometimes produces vomiting; but if certain precautions are taken this will rarely happen. It should be well diluted or it will cause a burning sensation in the throat. I usually prescribe it with tincture of orange-peel or syrup of tolu, and an aromatic water. It ought to be taken by the patient when he is in bed, and he should at once compose himself for sleep. Walking about, even crossing a room, after it is taken will often lead to its being vomited."

Some of the Uses of Ergot.—Dr. John Denham, formerly Master of the Rotunda Lying-in Hospital, has an essay upon *ergot of rye* in the Dublin Journal for April; and there are some salient points in this valuable essay. Ergot has been repeatedly given in the chronic wards as an emmenagogue, but with no beneficial results. In small and frequent doses it sometimes seems to do good in leucorrhœa; but the free internal use of iron, with a generous diet and astringent injections, are much more to be relied on. In some forms of hemorrhage, such as are often met with some days or even weeks after delivery, where the uterus remains softer and larger than usual, it is beneficial; and in those cases of hemorrhage consequent upon a uterine polypus the ergot seemed to hasten the expulsion of the polypus; but in such as were caused by fibroid enlargment there was no benefit from this agent. When given to pregnant women in repeated doses at any other than the full period it produces no effect whatever beyond nausea and loss of appetite. It produces no injurious effect upon the fetus in utero. Where the process of abortion has commenced the ergot hastens it materially and acts very beneficially. When given in the second stage of labor it often acts beneficially and hastens the labor; but if the labor be not soon completed, it is attended with great danger to the child, not from any toxic effect of the ergot, but by the mechanical obstruction it offers to the circulation, and the continuous and powerful contraction exerted on the child. In post-partum hemorrhage, after the expulsion of the placenta, Dr. Denham does not believe ergot exerts much influence upon the uterus, and therefore seldom uses it in such cases.

AMMONIA IN ANIMAL AND VEGETABLE POISONS AND IN TYPHOID FEVER. — Dr. A. S. Todd, of Wheeling (Transactions of the Medical Society of West Virginia), states, as the result of actual observation and experience for more than forty years, that he regards ammonia as the most prompt and certain remedy in animal and vegetable poisons when these have been applied to the surface, as in exposure to the poison oak, to snake-bites, etc. He uses the remedy externally—the aqua ammonia, with flaxseed or slippery-elm, made into a poultice and applied to the poisoned part—and internally in the form of the aromatic spirits of ammonia, in tea-spoonful doses, properly diluted, every three or four hours. In typhoid fever Dr. Todd also gives the aromatic spirits in the dose and at the interval just mentioned. In addition he is in the habit of having the entire body rubbed every day, or every other day, "with a coarse towel dampened with lukewarm ammonia-water." "The effects of this volatile alkali in destroying or abating the force of the *blood-poison* has fully satisfied me of its value as a therapeutical agent in the treatment of typhoid fever, and can therefore with confidence recommend to the consideration of the profession this *neutralizing agent.*"

ATROPIA IN OPHTHALMIC AND AURAL SURGERY.—Dr. Ernest Hart, Ophthalmic and Aural Surgeon to St. Mary's Hospital, writes in the British Medical Journal:

"Looking through a long list of cases, I have employed atropia drops in the course of the treatment of 1,523 out of 2,710 consecutive cases of disease and injury of the eye (a list not including, of course, affections of the ophthalmic appendages); and I pass in review a long array of cases in which I had to regret that it had not been used before the patients came into my hands. Two of the most recent consultations which I have entered were cases of injury to the eye during the last month. In both cases the treatment had been unexceptionable, except that atropia had not been used; and though the globes have been saved, the fixed and closed irides will make the possibilities of vision depend upon iridectomy under not very favorable circumstances. In the very last consultation on a case of iritis the treatment had been equally conducted without dilating the pupil. Mercury, leeches, and lotions were in use. A darkened room and an antiphlogistic diet were all in use when I was called; but the vision was extremely misty, the pupil contracted, and the patient in proportionate danger of "false pupil" from the effusion of lymph and of loss of sight.

"Now I do not think that I shall be using an exaggerated form of expression, or going beyond the strict and well-balanced weight of words which is necessary to give due force to the fact to be conveyed, if I say that we could in the treatment of ophthalmic disease better afford at this day, so far as our knowledge of disease and means of mastering it extend, to dispense with all other drugs, lotions, and applications put together than with this one *topical* medicament. Let us consider what atropine does for the inflamed eye. It allays local sensitiveness and removes local spasm; it gives to the eye and to its internal muscular apparatus—iris and ciliary muscle—physiological rest, the greatest of all curative means. Nor does it do this only, but in dilating the pupillary aperture it drives far from us the bugbear which long haunted the ophthalmic surgeon, and which still pursues those who are not sedulously active in the use of atropia—closure of the contracted pupil by an adherent plug of lymph, and gluing of the uveal surface of the iris to the lens. It would rob the consulting-surgeon of a great many profitable but trying operations if the atropine eye-drops were ready in every surgery, not only on all emergencies, but for the exigencies of daily practice. It is as safe a rule in ophthalmic practice to use an atropine drop when in doubt as in whist to play a trump. I can hardly think of more than one absolute contraindication, and that is the existing oval dilatation of the iris in glaucoma.

"There are, of course, also mechanical contraïndications, as in peripheral wounds of the cornea with hernia of the iris, where to dilate the iris is to increase the peripheral protrusion; but even here the moment the corneal gap is healed atropia becomes of the first necessity. But in all cases of iritis, in contusions and injuries of the eye, in corneitis, purulent ophthalmia, scrofulous ophthalmia, and deep-seated mixed inflammations of the eye, the local instillation of a solution of atropia is the most precious of therapeutic means. The most useful strength is, I think, expressed in the formula:

℞.	Neutral sulphate of atropia, . .	gr. ij;
	Glycerine, ...	gtt. v;
	Distilled water, ...	℥j.

The frequency of the use of the drop must vary with the facility and rapidity with which it acts. Where the iris has become much inflamed before the local treatment is adopted it is sometimes very indocile, slow to respond, and hard to dilate. Then the measure of frequency must be the amount of resistance, and perseverance must be the rule of treatment. In the treatment of keratitis and minor cases of deeper inflammations one application a day, or at most two, will suffice; and presently once in two or three days. It will be enough then to keep the pupil dilated and the ciliary apparatus at rest and free from tormenting spasm. The present result of the most careful observation of the origin and cause of ophthalmic disease, pursued with the advantages of the improved methods of optical diagnosis now at our command, is to simplify our treatment, and to ostracise a majority of superfluous agents of medication. With a little cotton-wool, alum, and glycerine, hot and cold water and atropine, and a pocket-case of instruments, we can treat with a previously unattainable success nearly the whole range of ophthalmic diseases. I am speaking of local and surgical treatment. Ointments, poultices, caustics, irritants, scarifications, venesections, blisterings, and setons may be looked upon almost as things of the past. The medical, dietetic, and hygienic treatments are favorably modified, and simplified to an almost equal extent, by the intelligent study of diathetic indications; but the whole shopful of topical applications may be left aside by the surgeon who will thoughtfully apply the vast resources of the few simple agents I have named, and of them all atropine is greatest.

"I will not undertake to say that mercury is useless in the treatment of some forms of (syphilitic) iritis; but I will affirm that I have repeatedly seen iritis occur and run a very severe course in patients previously and at the time already under the influence of mercury; and that in a long series of cases which I treated by atropia and careful dieting only, and without mercury, during five years at St. Mary's Hospital, the results were so excellent that I could not affirm that they would have been improved by the most guarded and judicious use of mercury.

"It is possible, though not easy, to abuse atropine. It must not be used, as I have said, in glaucoma or in peripheral wounds of the cornea. A case or two of troublesome constitutional symptoms, through absorption of the excess by the lachrymal mucous membrane, have been recorded. This is never likely to occur with ordinary care, and I have never seen it occur; but it may be well to bear it in mind in treating infants. The most convenient and unfailing application may be made by the use of the atropized gelatine disks which I introduced a few years since, and which are now largely used in this country and abroad. They are always ready, do not spoil by time, and are clean and precisely dosed, each disk containing as much as a drop of the solution I have mentioned."

THE MORAL TREATMENT OF HYSTERIA.—In Guy's Hospital Reports for 1872 Dr. Samuel Wilkes makes the following judicious remarks on the management of hysteria:

"It sometimes surprises me that medical men declare their utter helplessness while standing by the bedside of an hysterical patient. They will confess that all means have been tried in vain, that there is no real disease to cure, that it is an imaginary or nervous disorder, and nothing can be done, when it is their own presence in the case which constitutes the very root and foundation of the malady. Let us take the case of a girl who goes to her bed with an ideal paralysis of the legs, or some similar disorder. She sinks into a morbid state, and puts on a second nature; she becomes the center of a world of her own creating; she is the interesting invalid; she receives the sympathies of inquiring friends, the care of nurses, the consolation of the clergyman (for she is usually outwardly pious), and, above all, the daily visit of the medical practitioner, who prescribes appropriate physic. This is her perverted life; this is "her little game." Now and then the physician is called in, who gives his opinion that a great deal of the malady is due to hysteria, orders some iron and quinine, and perhaps galvanism, and so the play goes on. The medical man declares that he has tried every means and failed. Does he not see that the whole affair is a drama of the patient's own creation, and she the central figure of the piece? She is to be ill, she is to have her doctor, and enjoy in her morbid way all the interesting surroundings of the invalid. Does he not see that to cure her he must break into the charmed circle, and to spoil the play he must get rid of some of the performers? And does he not see that, even if he has no influence over others, he might withdraw himself? Here is a young lady who says, "I will be ill, and have a doctor to attend me." How can she accomplish this if the latter declines to obey her behests? or if he accepts the post how can he, in the name of common sense, say he can not break her of her fancy while he is a party to it? If he sees clearly the truth of what I have been saying, his duty is, as professional adviser to the family of the patient, to retire, and use his influence to prevent the calling in of another medical man. I have myself seen in several instances where such advice has been given, and the parents have said to their child, "We will have no more doctors," that recovery has at once ensued. In one of the worst cases of hysteria I ever saw, where a young lady had been bedridden for three years, and during this time must have swallowed hogsheads of physic, and had her body covered with leeches and blisters without number, besides being well rubbed with tartar-emetic ointment, the medical attendant suddenly died, when the father declared that his daughter was ruining him, and that he would have no more doctors. From that time she began to recover, and may now be seen walking about quite well. Of course, if the medical man be wise and judicious, he may adopt various plans to break up the scheme of the young lady who has become the presiding genius, not only in the household, but in the whole family-circle for miles around. My complaint is against the acts of a medical man who pays a daily visit to his patient, sends her physic to be taken every four hours, besides sleeping draughts, prescribes a very particular regimen, consisting of all kinds of delicacies, commencing with rum and milk in the morning, and then says he can not cure her of an imaginary complaint. Next to giving her physic, when he knows there is nothing the matter with her, the worst thing is to diet her, for there is nothing so harmful in perpetuating a nervous malady as this. If he would one day say, "No more physic, and as for diet eat and drink what you would like," he would be administering a moral stimulus more efficacious than all the iron and quinine she had ever swallowed.

"A young lady keeps her bed for two or three years for an affection of the hip, and is seen by all the leading men in London. One day the clergyman walks in, prays over her, and she gets up and walks. The case is reported in all the religious journals as a miracle, whereupon the doctors all join in declaring that the case was one of hysteria, and that there was nothing the matter with her. Then, I would ask, why was that girl subjected to local treatment and to the infliction of physic every day for years? Why did not the doctors do what the parson did? Of course the utmost acumen is required in order to make the diagnosis; for it is as cruel to call every female disorder hysterical as it is baneful to treat every malady as real. It is the doctor's daily labor to unravel the meaning of pain, whether it has a real seat or whether it be subjective. No rules for diagnosis can be laid down; every case must stand on its merits. I am merely offering a quota toward the value of moral treatment in genuine cases of hysteria, and of the harm done by all other means. I speak without hesitation in this matter, for some of the most remarkable recoveries that ever could have occurred have taken place in my ward in cases which had been hopelessly despaired of when the usual routine was being pursued."

BLISTERS IN PNEUMONIA.—Dr. C. J. B. Williams, in speaking of the treatment of pneumonia, says: "My experience has taught me to put great faith in large blisters, both in asthenic pneumonia and in bronchitis, and I am confident that I have seen many lives saved by their means. Instead of being lowering they give a salutary excitement to the circulation, and the copious serous discharge which they produce from the skin tends to relieve the congested lung without wasting the red blood that is so needed to sustain the functions. Small blisters tease as much as large ones, and are far inferior in the relief they afford."

HYPODERMIC HYDROCHLORATE OF NARCEINE.—Dr. Petrini, in the *Bulletin de Therap.*, advocates this salt as superior to sulphate of atropine or muriate of morphia. In very small doses—five milligrammes to one centigramme—its calmative power is manifest. It is superior in its power to control sickness to salts of morphia. When all preparations of opium or morphia fail as hypnotics a small dose of the salt of narceine will succeed. In the smallest doses its effects are also to slightly raise the temperature as well as the frequency of both the pulse and respiration, but at the same time to reduce arterial tension. (The Doctor.)

Notes and Queries.

EXTRA-UTERINE PREGNANCY. — Dr. A. R. Page, of New Sharon, Iowa, communicates the following:

"About the 1st of March, 1871, Mrs. S. Lloyd, aged thirty-five, was afflicted with severe pain, referred to the umbilicus and the region of the fourth and fifth lumbar vertebræ. When called to her bedside I found her convulsed with pain, and after administering an anodyne gleaned from the friends that she was supposed to be in the sixth month of pregnancy. Pain had been almost constant during the last month, and was much aggravated by exercise, especially movements upon the feet or in the upright position. Stethoscopic examination revealed the fact that she was possessed of a living fetus, situated almost entirely in the right lumbar region. Palpation could not be used with much advantage in consequence of the tenderness of the parts; but the supposition at this time was that some uterine tumor or obstruction had distended the walls in this direction, and produced the unnatural position of the fetus. A month passed, during which the patient was kept comparatively comfortable with anodynes, when by the absence of the heart's action the fetus was found to be dead. After another month the effect of ulceration could be observed beneath the integument and fascia, and by moving the cyst containing the foreign substance it was found to be adherent to the abdominal parietes. On the 27th of May a probe was forced through on the linea alba at the umbilicus, and a portion of the amniotic fluid and hair from the fetus obtained. This confirmed the diagnosis, after which an incision four inches long in the linea alba, from the umbilicus down, was made, and the fetus removed. The placenta was now detached from the external fundus of the uterus, carefully removed, and the incision closed by sutures. The wound was dressed with a ten-grain solution of carbolic acid, and healed in six weeks. The fetus was a perfectly-formed female child of five pounds weight. The woman resides in this place, and is now in perfect health. Dr. N. L. McCallister assisted at the operation.

ARTIFICIAL ANUS AT THE UMBILICUS PROCEEDING FROM TUBERCULAR DEGENERATION.—The following is reported by W. P. White, M. D., of Louisville, Ky.:

"A negro boy, aged twelve years, the subject, was attacked by acute phthisis. At the expiration of three weeks great abdominal enlargement occurred. Congenital umbilical hernia existed coincident with the abdominal swelling; inflammation occurred in the umbilicus, attended by intense pain. A few days subsequently ulceration took place, followed by an opening into the bowel from which fecal matter was abundantly discharged. Up to this time, and for a day after, defecation occurred naturally. There had been no constipation at any time; but after the establishment of the artificial anus all of the feces came away through this opening. Peritonitis was rapidly developed, and the patient succumbed on the fourth day. Post-mortem examination showed an opening into the transverse colon, which was glued to the abdominal walls by recent inflammatory exudation. Tubercles were found in abundance in nearly all the viscera.

THE ASSOCIATION OF AMERICAN MEDICAL EDITORS.—This organization held its annual meeting in Philadelphia on Monday, May 6th. Dr. Dawson, of the American Journal of Obstetrics, the president of the Association, delivered his address, its subject being the *Origin of Medical Science.* The address evinced much research, and was a valuable epitome of the history of medicine.

An important step was taken by the Association that it is hoped will prove of benefit to the profession, in this that a prize of one hundred dollars shall be given annually by the Association to the author of the best essay upon a subject selected by the Association, only members of the Association being permitted to be competitors. To Dr. Dawson is due the credit of suggesting this proposition, and to him also is due the credit of offering the first prize. The subject for a prize essay for 1873 is *Diseases of the Ovaries;* that for 1874 is *Climate in the Treatment of Pulmonary Tuberculosis.*

The following gentlemen were elected officers for the ensuing year: *President,* Dr. Theophilus Parvin, of Indianapolis; *Vice-president,* Dr. Alex. J. Stone, of St. Paul; *Secretary,* Dr. F. H. Davis, of Chicago.

American Medical Association at Philadelphia.—The twenty-third annual meeting of the American Medical Association, held at Philadelphia on the 7th, 8th, 9th, and 10th of May, was probably one of the, if not the, most important meetings of this organization. It was a success in regard of numbers, the largest attendance ever known; it was a success in regard of the general good feeling and harmony which prevailed, and in regard of the kind courtesy and generous hospitality of the medical gentlemen and other citizens of Philadelphia. It was a success too in regard of many valuable papers presented to the several *sections,* and interesting discussions upon those papers; and a success too in regard not so much of what may have been actually done by the Association as a body, as of that the preparation for doing which was made. Very important results are destined, we fully believe, to ensue from this Philadelphia meeting. The Association is the representative of the profession of the United States, not of any city nor of any set, and should be honored and cordially sustained by all physicians who have at heart the honor of American medicine. If it has faults, if it has committed errors, let those who are cognizant thereof seek in the Association to correct the one and retrieve the other. To assail it from without is to weaken its influence and to retard its progress. To-day it is the only external bond of union of the American profession, and that bond once severed this profession separates into fragments, a prey to discord or petty provincialism.

An eloquent address of welcome was delivered by Prof. R. E. Rogers; then followed a report from Dr. Edward Hartshorne, chairman of the Committee of Arrangements; and then came Dr. Yandell's inaugural, which we publish elsewhere.

Immediately after the President's address a motion was made by Dr. Askew "that all questions of a personal character, including complaints and protests, and all questions of credentials, be referred at once to the Committee on Ethics, and without discussion." This, after a brief discussion, was unanimously carried; and thus the door was effectually closed to those controversies and bitter disputes which it was feared by some might disturb the harmony, impair the usefulness, and consume the time of the Association.

On motion of Dr. L. S. Bolles, of Pennsylvania, the resolution was subsequently adopted as a standing rule of the Association.

The Committee on Ethics appointed by the chair consisted of Dr. H. F. Askew, Delaware; Dr. N. S. Davis, Illinois; Dr. Calvin Seavy, Maine; Dr. J. K. Bartlett, Wisconsin; and Dr. S. D. Gross, Philadelphia. On Thursday morning they reported through Dr. N. S. Davis as follows:

Your committee have made a careful and patient examination of each and every subject referred to them by the Association. In all cases involving the rights of individuals or organized institutions to representation, the individuals and the representatives of such institutions have been invited before the committee, and their testimony carefully taken. As a result of these investigations the committee ask leave to submit the following report.

In relation to the preamble and resolutions offered by Dr. Davis touching the Massachusetts Medical Society, your committee recommend them for unanimous adoption by the Association. They are as follows:

Whereas, it has been represented that the Massachusetts Medical Society considers that its delegations to the annual meeting of the American Medical Association in Washington, May, 1870, were unjustly excluded by the Committee of Arrangements; and

Whereas, the action of the Committee on Ethics, at the same meeting, in refusing to allow the right of said Committee of Arrangements to exclude the Massachusetts delegation, is not yet fully understood by that society; therefore

Resolved, that this Association acknowledges the great and effective efforts of the Massachusetts Society to elevate the profession and to suppress quackery of all sorts, and especially assure that society of encouragement and support in its present exertions to rid itself of all pretenders.

Resolved, that the said Association trusts that hereafter there will be a united and harmonious action of all the several bodies of which the Association may be composed.

Resolved, that a copy of these resolutions be forwarded to the president of the Massachusetts Medical Society.

This was agreed to by the Association.

The committee report in regard to the official communication of the corresponding secretary of the Medical Association of the District of Columbia, certifying that Drs. J. D. Barnes, S. S. Bond, A. McWilliams, W. E. Poulton, S. B. Blanchard, S. W. Caldwell, J. L. Crouse, James Phillips, and G. Sylvester have forfeited their membership in that society by reason of not having paid their dues for three years, and after repeated notices of the fact and its consequences, that their names be stricken from the roll of membership, in accordance with the fifth paragraph of the second section of the constitution of this Association, and also the same action in regard to Dr. D. W. Bliss, who is under sentence of expulsion from that society. (Unanimously adopted.)

As to alumni associations of medical colleges, the committee reported that it did not consider them such medical societies as were intended by the constitution to be eligible to membership, and hence they recommend that no delegates be received from any of the alumni associations of any of the medical colleges from any part of the country. Unanimously agreed to.

In regard to the Pathological Society of Berkes County, Pennsylvania, the registration of whose delegates had been postponed on account of the protest alleging the want of good standing on the part of that society, the committee postponed action from the want of proper evidence.

On motion, this request was granted, and further action on this institution was postponed.

In regard to the Academy of Medicine of Washington, D. C., the Freedman's Hospital of the District of Columbia, and the Howard University of Washington, D. C., the registration of whose delegates had been postponed by the Committee of Arrangements, on account of want of good standing on the part of these institutions, as indicated by the action of this Association in 1870 and 1871, and by information communicated by that committee, we report the facts as follows: *First*, that this Association, at its meeting in San Francisco in 1871, by the emphatic vote of eighty-three to twenty-six, refused to so amend the constitution as to admit delegates from colleges in which women are taught and graduated in medicine, and from hospitals in which women graduates in medicine attend. *Second*, that this Association, in 1870, declared by an almost equally emphatic vote that a medical society constituted in part of members who are not licensed to practice in accordance with the civil law governing the practice of medicine in the state or district in which the society is located is not entitled to representation in this Association. *Third*, that sections 3, 4, and 5 of the act of Congress, passed July, 1838, incorporating the Medical Society of the District of Columbia, and which has been the law regulating the practice of medicine in that District up to the present time, requires all persons coming into the District to practice medicine to apply for, and within six months obtain, a license to practice from the board of examiners appointed for that purpose, and makes it a misdemeanor, punishable by a fine of fifty dollars, for every act of practice without such license. *Fourth*, that it has been proven by the testimony of several witnesses that the Medical Society of the Academy of Washington now contains in full fellowship at least four or five members who have never applied for or obtained license to practice, and yet are actually practicing medicine, and three of whom are on the list of delegates sent by that society to this Association; also that one of them is a member of the medical staff of the Freedman's Hospital, and also that several of the faculty of the Howard University are members of the same academy of medicine, and one of the teachers is a woman.

In view of these facts the committee can not regard either of the three institutions named as in good standing, whether tested by civil law, by the former decisions of this Association, or by its code of ethics; and hence the committee recommend that the delegates from those several institutions be not received into this body.

In reference to the resolution of Dr. Finley, asking of this committee a clear interpretion of what is now a part of the by-laws of the Association, the committee offer the following:

Resolved, that members of the profession hired by the month or year for definite wages by families, railroads, manufacturing corporations, or any money-making institution whatever, for ordinary surgical or medical practice, always excepting eleemosenary and charitable institutions and hospitals, are to be classed as irregular practitioners, and therefore disqualified for membership in this Association, or in state or county societies.

Dr. Weatherly moved to refer this question back to the state societies. Agreed to.

The report of the committee was then received and adopted by a very large majority.

Evidence of Medical Experts.—The following preamble and resolutions, offered by Dr. Henry Hartshorne, of Pennsylvania, at the Section on Chemistry and Materia Medica, and by them adopted, were on motion unanimously adopted by the Association:

Whereas, in all capital criminal trials involving questions of medical jurisprudence, there is an obvious disadvantage in the testimony of the scientific experts, being made to appear partial or antagonistic by their being employed as witnesses upon one or the other side, therefore

Resolved, that it is the sense of this Association that in important criminal cases requiring the evidence of medical or chemical experts the cause of justice will be promoted by the appointment by the court in every such case of a commission of experts, empowered to collect all purely scientific testimony bearing on the case, and report upon it to the court by which the case is to be tried.

Resolved, that by the appointment of such scientific commission the present system of summoning chemical and medical witnesses in criminal cases might be dispensed with to advantage.

Resolved, that the same recommendation applies also to cases of surgical or medical malpractice.

Resolved, that the state associations be requested to bring this matter at an early date before their respective legislatures.

Prize Essay.—The Committee on Prize Essays awarded but one prize, which was to an essay entitled "What Physiological Value has Phosphorus as an Organismal Element?" written by Dr. Samuel R. Percy, of New York.

Preliminary Education.—It will be remembered that a committee was appointed at a previous meeting of the Association to correspond with the different state medical societies, and urge through them a higher standard of preliminary education in young men proposing to study medicine. Dr. N. S. Davis, chairman of that committee, made the following report, which was received, and the committee continued:

Your committee, in compliance with the instructions of the Association at the last annual meeting, have sent printed copies of their report last year to the secretaries of the several state medical societies, asking them to call the attention of their respective societies specially to the resolution appended to the report relating to the subject of the preliminary education of those proposing to study medicine. Such of the state societies as have held their meetings since the communication was sent have given the subject due attention, and have given indications of most gratifying progress in the development of a proper professional sentiment on that subject; but as many of the societies have not had time to report we would simply report progress and ask to be continued.

To prevent Mistakes by Druggists.—The following resolutions, offered by Dr. John H. Packard, as coming from the College of Physicians of Philadelphia, were adopted:

Resolved, that it is recommended to all druggists to place all external remedies in bottles not only colored, so as to appeal to the eye, but also rough upon the side, so that by the sense of touch no mistake shall be possible even in the dark.

Resolved, that all bottles containing poisons should not only be labeled "poison," but also with another label indicating the most efficient and convenient antidote.

Nomenclature of Diseases.—Dr. Francis G. Smith, chairman of the Committee on the Nomenclature of Diseases, reported that the system presented by the committee is based upon that of the Royal College of Physicians of London, with such additions and modifications as in the judgment of the committee were needed. In selecting Latin equivalents the committee had frequently departed from the English nomenclature, and so far as possible the English rather than the Latin terms have been employed. The report had appended to it the following:

Resolved, that the report of the Committee on Nomenclature of Diseases be referred to a special committee of five members, to be appointed by the president, who shall examine it and report upon its final disposition at the present meeting of the Association.

Resolved, that on the favorable report of said committee it shall be referred back to the Committee on Nomenclature for the preparation of an index.

Dr. J. J. Woodward, of the United States army, offered a minority report, as follows:

A minority of the Committee on Nomenclature have the honor to report that while they entertain the highest respect for the abilities and the learning of those members of the committee whose residence in Philadelphia has enabled them to attend its meetings and aid in the production of the report which has just been submitted, they nevertheless feel it a duty to express their earnest conviction that the adoption of a nomenclature and classification by this Association is a matter of too great importance to be acted upon hastily, before the members have had any opportunity to examine for themselves the nomenclature and classification proposed.

The minority of the committee have had no opportunity to examine the proof-sheets of the work until since the commencement of the present meeting of the Association, and the time since then has been far too short for them to form an opinion as to details. They do not therefore wish to be understood as criticising the work done in any way, but simply ask as a measure of justice and wisdom that it may be submitted to the judgment of the profession before it is acted upon by this body.

We have the honor therefore to offer the following resolution as a substitute for the resolution offered by the majority:

Resolved, that the nomenclature and classification just submitted by the committee be published in the Transactions, that one thousand extra copies be printed in pamphlet form and distributed to the profession, and that the question of the adoption of the nomenclature and classification by this body be postponed till the next annual meeting.

Both reports were received, and that of Dr. Woodward adopted.

Addresses in Medicine, Surgery, and Midwifery instead of Reports on Medical Education, Medical Literature, etc.—Dr. S. D. Gross offered the following amendment to the by-laws:

That instead of a report on medical education, on medical literature, on climatology, and on epidemic diseases, there shall annually be delivered before the Association, at its general meetings, an address in medicine, an address in surgery, and an address in midwifery or the diseases of children; the lecturers to be appointed this year by the president, afterward by the Committee on Nominations.

After some discussion, on motion of Dr. A. B. Palmer, of Michigan, it was laid over for consideration at the next session.

Various papers were presented and referred to the different sections. The sections most largely attended were those of *Practical Medicine and Obstetrics* and of *Anatomy and Surgery*.

It is not necessary, nor have we space, to follow the history of the proceedings from day to day. Many of our readers will have them in full in the published volume of Transactions;

and those who do not thus receive them, or who can not wait until this volume is published, can have the complete minutes issued in pamphlet form by writing to Dr. Wm. B. Atkinson, No. 1400 Pine Street, Philadelphia, inclosing fifty cents in the letter.

The officers for the ensuing year are: *President*—Dr. Thos. M. Logan, California; *Vice-presidents*—1. Dr. B. H. Catlin, Connecticut; 2. Dr. W. H. McPheeters, Missouri; 3. Dr. A. M. Pollock, Pennsylvania; 4. Dr. W. T. Briggs, Tennessee; *Secretary*—Dr. Wm. B. Atkinson, Pennsylvania; *Treasurer*—Dr. Caspar Wister, Pennsylvania; *Librarian*—Dr. William Lee, District of Columbia; *Committee on Library*—Dr. J. M. Toner, District of Columbia.

St. Louis is the next place of meeting; and we trust that in numbers assembled, in interest manifested, and in useful work accomplished the meeting of 1873 may even exceed that of 1872.

MEDICAL SOCIETY OF KENTUCKY.—The meeting of this Society, which was held in this city on the 2d and 3d of April, was the largest and most interesting that has taken place for many years. An address was delivered by Dr. L. P. Yandell, sr., welcoming the members to Louisville as Chairman of the Committee of Arrangements, and reverting to former meetings of the Society rendered memorable by the eloquence, wit, and learning of Drake, Palmer, Sutton, Gross, Chipley, and others. An address was delivered by the president and numerous papers were read, which will form a valuable volume of transactions. The officers elected were Dr. Lewis Rogers, president; Drs. James W. Thompson and Joseph Smith, vice-presidents; Dr. J. A. Larrabee, recording secretary; Dr. L. B. Todd, treasurer; Dr. W. T. Humphreys, corresponding secretary.

Dr. J. D. Jackson read a report on public hygiene. Dr. L. P. Yandell, jr., reported on the utility of the sphygmograph, and communicated some observations on the cure of the cyanosis resulting from nitrate of silver by iodide of potassium, and on ringworm in a child contracted from favus on a cat. A paper was read by Dr. D. S. Reynolds, entitled *The Ophthalmoscope, some of its Relations, their Meaning, etc.* Dr. James W. Thompson read a report on resection of the long bones. A paper translated from the German was read by Dr. Brandeis on the hydrate of chloral. Dr. Frazee read a long report on the mineral waters of Kentucky. Dr. Jos. Smith reported on finance. A paper suggesting some novelties in surgical apparatus was read by Dr. J. W. Clemens. One was read by Dr. J. J. Speed on phthisis, which our readers have already had an opportunity of reading. Dr. D. W. Yandell reported a number of cases of epilepsy successfully treated by bromide of potassium and sulphate of atropia. Communications from Dr. D. T. Smith and Dr. C. T. Ulrich were referred, without being read, to the committee of publication. We shall look with interest for the appearance of these several papers in the volume of Transactions.

An endeavor was made toward the close of the meeting to interrupt the professional business by the introduction of some personal matters; but the attempt met with a prompt and stern rebuke. Members said they had not left their business and homes to listen to personal griefs and heartburnings. Home, they thought, was the proper place for ventilating such bickerings, which seemed just now in Kentucky to be confined to Louisville, to which locality it was most desirable that, if possible, they should be limited. They belonged to the local societies of which the aggrieved parties are members; and on this view the matter was excluded by an overwhelming vote. The meeting closed with a banquet, which was greatly relished by the members. The next meeting of the Society will be held at Paducah.

ADDRESS

BEFORE THE

AMERICAN MEDICAL ASSOCIATION,

PHILADELPHIA, MAY 7, 1872.

BY D. W. YANDELL, M. D., PRESIDENT.

GENTLEMEN: The migratory character of our Association is one of its best features. If it were stationary its meetings would no doubt be attended by many, and it would, while conducted with wisdom and moderation, exert a good influence upon the profession all over the country. But its influence is incalculably enhanced by its journeyings from point to point. In this way multitudes are brought into sympathy with it who otherwise would never attend one of its meetings or read a page of its proceedings. Whatever else may be denied the Association, no one can hesitate to admit that it is grand in its annual migrations. No other medical body ever in the same time traversed spaces so vast. Last year we met on the western slopes of the Rocky Mountains, and sat with the sound of the many-voiced Pacific in our ears. This year we have assembled on the eastern side of the Alleghanies, and our foreheads are bathed in the gales of the Atlantic. None of us who were privileged to be present at that meeting in San Francisco can ever forget the circumstances attending it. We were introduced to a new world; trees, birds, quadrupeds of new species; an empire which, though the growth of but a quarter of a century, excites the wonder and admiration of mankind.

If the novelty of the scene rendered our meeting in California one of peculiar interest, the meeting here is not less interesting on account of the historical associations of the city in which we are convened. San Francisco is the most recently erected of all our great cities. Philadelphia is the most ancient of all our great medical centers. It is, in a sense, the cradle of American Medicine. Here medical teaching was formally inaugurated on this continent. We seem to hear again this morning the confident words of Dr. John Morgan, spoken one hundred and seven years ago, as he pleaded for the medical independence of the colonies, and proved to the satisfaction of the citizens of Philadelphia that the time had come when America should have a medical school of her own.

That first faculty, composed of Morgan, Kuhn, Shippen, Bond, and Rush, rises to our mind as we enter on our duties here to-day. The old-school, elegant Shippen, sitting, not very gracefully, on his three chairs, and essaying to teach anatomy, and surgery, and midwifery. The rigid, stately Adam Kuhn, his hands and bosom in ruffles, his exuberant hair done up by his hair-dresser in the style of an imposing wig, presenting with his gold-headed cane a perfect picture of the grave doctor of the preceding age; punctual to the half minute—beginning his lectures just as the clock pealed its last stroke; waiting for the physician who was to meet him in consultation the five minutes of grace, then stalking out of the sick-room, perhaps to encounter his tardy brother on the stairway or the door-steps, but hardly pausing long enough to hear the delinquent's excuse, and never turning back. Rigidly exact in his prescriptions, he has just ordered a patient some weak sage-tea. The kindly nurse meekly suggests as he walks away, "I suppose, doctor, I may give the patient a little toast-water, or lemonade, too, if she craves it?" And we see him turning round with the solemnity of one who seemed to feel that life hung upon his words, and hear his incisive reply, "I have said sage-tea; good morning, madam." And how strangely sounds to us that declaration of the old professor of practice made near the close of his life: "If called upon to say with what remedies I have done most good in my long practice, I should name the volatile alkali and wine whey!"

But in that group of professors, untried as yet, rises far above the rest that figure so familiar to us all, with its meditative face and calm, expansive brow, the philosophic, active-minded Rush. He has just returned from Edinburgh, where he listened to the lectures and enjoyed the friendship of the great Cullen. In all the five years of his pupilage he tells us he never wasted a day in amusement. He has entered into his profession with his whole soul. At the early age of twenty-four he has been elected professor of chemistry. We pursue his steps along his brilliant course as statesman, philanthropist, physician, author; a signer of the Declaration of Independence; a writer on temperance, on insanity, on medical education; author of medical histories so full and graphic that he is soon styled "the American Sydenham." We see him, year after year, battling with the fever that devastated his city, and with his brethren about calomel and jalap and blood-letting. We read with absorbing interest his accounts of the wasting epidemic, and are thrilled by a passage in his diary, entered at the close of one of his terrible days, just after adopting a new mode of practice: "I have visited one hundred patients to-day, and, thank God! not one of them has died." His terse, sagacious remarks, repeated everywhere by his pupils till they became household words with the people, come back to us as we meet here where he was so long the master-spirit of the profession. Consulted by our grandfathers in Charleston, in Georgia, in the wilds of Kentucky and Tennessee, he was acknowledged everywhere the head of the profession in America. Students flocked to him as they had done before to Cullen at Edinburgh and to Boerhaave at Leyden. Sitting here in his chair of theory and practice, he gave laws, as nearly as physician could ever give law, to the profession of a continent, and has left behind him a name the most resounding in our medical annals.

With Rush, after a time, was Caspar Wistar in anatomy, which his eloquence made attractive. No medical man can hear Philadelphia named and not think of Wistar, whose work on anatomy, the first work on the subject by an American, was long a text-book in all our medical schools. Physick too rises up among the great names that gave renown to the school at a later period. Cold in manner, unsocial, but grand in the simplicity of his character, he walked the streets of Philadelphia five years, as he has told us, before he made money enough to pay for his shoe-leather. And with him is associated the name of his nephew, Dorsey, author of the first American system of surgery, who, unfortunately for the profession, was cut off in his early prime. Prominent among the foremost was one whom many of you have seen, the first President of our Association—the generous, witty, genial, eloquent Chapman, upon whom fell the mantle of Rush when that great man left the earth. You who saw him at Baltimore twenty-four years ago, as he stood up to deliver his inaugural address, can never forget his form, his face, his voice, his whole bearing and manner as that of one who felt that the dignity of a great profession rested on him. In this city too lived for a short time, adorning the profession by his varied labors, the brilliant Godman, at once physician, poet, and philosopher; but, like Dorsey, dying young.

The last link which bound the present with the past has just been parted. I allude to Dr. Samuel Jackson. Who that remembers his silvery locks, his sparkling eyes, and the sweet and winning smile that overspread his countenance as he expounded his favorite doctrines, can wonder how readily they were accepted as true? What he was in the beginning and in his prime, he continued to the last years of his patriarchal old age. Keen to perceive, eager to learn, earnest to instruct, a man whose attachment to his profession was not that which springs alone from habit or from gratified ambition, but an ardent love which burned brighter and brighter until it was extinguished by the hand of death.

With these eminent names are associated those of Dewees, Hare, Hartshorne, Horner, Meigs, Mutter, Mitchell, Dunglison, and a long list of others that will live in history. They crowd upon our memories as we walk along the streets that once resounded with their footsteps—through a city rendered illustrious by their labors. They have left successors worthy of their great reputation, who have made the air of Philadelphia luminous with their works.

It is an interesting coincidence that the cradle of American medical education should also be the cradle of the American Medical Association. We have once more come back to the spot where the Association was organized a quarter of a century ago. Many of you, in coming to this meeting, return to Alma Mater. No doubt with many this has been the leading inducement to come here. You come to renew the pleasing associations of youth, hoping to grasp once more the hands of the few venerated teachers who still linger on the stage. That with all these attractions this meeting should be the largest in the history of the Association is not surprising. I rejoice with you at seeing such an outpouring of the profession. There is something inspiring in the spectacle here before me. At the same time you will not question my sincerity when I declare to you that I am embarrassed by the duty of having to address so august a body, and would gladly devolve that task on some one better fitted for it than I am.

In proceeding to the discharge of this public duty, I have deemed that I should be safe in pursuing the line of thought marked out for me by many of my distinguished predecessors; I mean in devoting a few words to the subject of Medical Education. This, if it has not been a standing theme before the Association, has been up so often that it would seem hardly respectful to it not to spend a little time in its discussion.

Medical education has been the one absorbing topic, and if there is a single question upon which presidents and committees of Education have agreed, from the first Convention in New York down to the last utterance on the subject at San Francisco, it is that the American system of medical education is radically defective. The Association, year after year, has been invoked to remedy abuses and rescue the profession from impending degradation. The Association indeed originated in this wide-spread feeling of discontent with the prevalent condition of things in the profession. "Reform" was the watchword of the convention which met in New York in 1846. Some of the best men in the profession being convinced that nothing could be done without general coöperation, the convention was called in the belief that thus reform might be brought about. The members of that convention came together with no very definite plans of action, but with a feeling that something must be done. The idea of reform has been the idea underlying the whole movement and animating its most active members with a zeal which could hardly have been inspired by a less generous cause.

The first meeting of the convention was an encouraging one, and a second one was called to meet here. This Association was organized, and Chapman, then the foremost of all American teachers of medicine, opened his address the next spring at Baltimore with the declaration that "the profession to which we belong, once venerated on account of its antiquity, its varied and profound science, its elegant literature, its polite accomplishments, its virtues, has become corrupt and degenerate to the forfeiture of its social position, and with it of the homage it formerly received spontaneously and universally."

My old neighbor, Professor Henry Miller, in his address to the Association at New Haven, indulged in the same strain. Borrowing the language of Dr. Drake, he declared that "even at this late period the profession abounds in students and practitioners who are radically deficient in spelling, grammar, etymology, descriptive geography, arithmetic, and I might add book-keeping, but that they generally apply themselves to the study of this important branch with a diligence that supplies the want of early opportunities." And he added, "all candid men who have had any experience in medical schools must confess that the examinations of the green-room annually reveal a sum of ignorance or of vague and misty perceptions of fundamental medical truth, even in many who are invested with the honors of the doctorate, which is truly amazing. For myself I can most solemnly declare that the most mournful and humiliating passages in my professional life have been these annually-recurring examinations in which such scanty harvests have been reaped as the reward of a winter's faithful toil."

My distinguished and honored master, Prof. Gross, has more recently expressed himself to the same effect. "The future," he declares, "holds out no promise of amendment. We shall go on from bad to worse until the people can stand it no longer, and then we may hope to be able to effect some reform."

Dr. Baldwin, in his able address at New Orleans, confessed his despair of seeing the evils of our system of education corrected through any of the agencies heretofore employed by the Association, and could see no mode by which it could be accomplished except Federal legislation, through national medical schools incorporated by Congress. "Make the salaries of the professors large," he says, "and not to depend upon the number of students, and let the Federal Government assume a proper share of the expenses incurred."

It may be because my temperament is more sanguine, or it may be because I am a younger man and less experienced in the profession than most of those who have written in this way about its present state and future prospects; but whatever be the explanation, I have to confess that I do not share in these gloomy views and prognostications. Mine is a more cheerful creed. The profession does not appear to my mind "corrupt and degenerate." I do not believe "it is going from bad to worse," and that the people will have to rise in their majesty to stay its downward progress. I can not see the thing in this light at all, and so am not ready to appeal to Federal legislation to correct our evils, and certainly should not go to Congress to establish national medical schools.

Beyond all controversy there are grave defects in the education of many of our students, and of many of our practitioners of medicine. Not a few of them, I am afraid, have very slight acquaintance with grammar or physical geography, and too many of them know little about etymology, and are bad spellers. It is a pity that this is so, and I should be glad to see a different state of things. But are matters in this respect worse than they were in the time of our fathers? Has the case ever been otherwise, do you suppose, in all the history of our profession? At what period was the golden age of medicine, when all who professed it were scholars, and all who aspired to its honors were worthy of them?

My learned friend, Dr. Baldwin, was a student in Transylvania University when that medical institution was at the height of its fame. When quoting, with approbation, the comments of Prof. Drake and Prof. Miller on the spelling and grammar of the students and physicians of our day, he could hardly have forgotten that two of the professors at whose feet he sat with so much profit were understood to be bad spellers and by no means accurate in their grammar. I refer to the illustrious Dudley and his distinguished colleague, Dr. Wm. H. Richardson. Dr. Richardson was much less widely known than his associate; but history will record of him that, despite his grammatical inaccuracies, which often raised a smile on the countenances of his pupils, he maintained himself in the school for twenty-six years — in fact, from the organization of the first faculty down to the day of his death—by the side of such scholars as Caldwell, Cooke, Eberle, Nathan Smith, and Bartlett. Nor did I ever hear that his students or those of his eminent associate complained that one cut with less dexterity for stone or the other was less successful as an obstetrician on account of their imperfect English education. The case of Dr. Richardson is the more noteworthy from the fact that at the time when he was first appointed to a professorship he was not even a graduate in medicine, but received the honorary degree of M. D. from the College of Physicians and Surgeons of New York after he had delivered a course of lectures and signed at least one diploma.

Nor can it be affirmed with truth that these noted teachers rose to their distinction by force of great intellectual abilities. They were not endowed with extraordinary mental gifts, but achieved success by bending all the powers of their minds to their special pursuits; and by such wise direction of their faculties they made names which filled their country in their day, Dudley placing himself in the foremost rank of lithotomists, and as a teacher at the head of the faculty of Transylvania University. It is not impossible that among the many medical schools of the country instances might be found to-day of scholarship as deficient as these; but if they exist the examples are not so conspicuous. Things may be very bad yet in that direction, but it is doing the profession injustice to say they are growing worse.

And after all, I submit most respectfully whether it is not possible that we have attached too much importance to this humble accomplishment of spelling? A ludicrous blemish assuredly it is on the literary character of any one not to be able to spell correctly, and especially in any one belonging to a learned profession, and it places the individual at a great disadvantage; but I confess I am not able to see why it should prove fatal to success in life, as certainly it did not in the cases just alluded to, and has not done in many others which no doubt occur to you all. Napoleon I., it has been affirmed, never acquired the art of spelling the French language correctly, with all his consummate art in playing upon the imaginations of the French people. And it is a fact well known to the correspondents of our great Andrew Jackson that he was not a correct speller, notwithstanding that the world believes he was a successful leader of armies, and made a President of the United States whom even his enemies were obliged to respect; and, what is more than all this, as bearing upon the question of etymology and orthography, was actually, in his old age, made a doctor of laws by that renowned old Harvard of which we are so proud.

Complaints similar to those so often repeated here in regard to the education of medical students reach us from other countries and from quarters whence we should least expect to hear them. The profession of Great Britain, with all that it has achieved, is by no means satisfied with the state of things in the medical colleges of that kingdom. "The students who come to our medical colleges," says a late English writer, "are, in a large proportion, deficient in preliminary education, and wholly untrained to any kind of scientific knowledge or method; they come too young and too little instructed."

Education is indeed a plant of slow growth. Systems of education are perfected only by ages of infinite effort. Railways and telegraphs have wonderfully improved intercommunication between the nations of the earth, but art has not yet pointed out any royal road to learning. It takes a boy now as long to learn to read or write a page, or to commit the multiplication table to memory, as it did our forefathers when travel was over miry roads in stage coaches or on horseback. The people learn slowly, and are hardly yet awake to the value of education; and our students of medicine come from the people. Of education it may be said as of nations, it can not be created; it grows. No wonder then that students sometimes knock at the doors of our medical colleges who have not gone far into arithmetic or physical geography, and are "too little instructed" generally.

But while awarding censure let us be just in its distribution. Let us ask ourselves whether those "vague and misty perceptions of fundamental medical truth," with which teachers complain of meeting occasionally "in the green-room," may not be somewhat chargeable to the learned professors themselves? "I have a strong impression," says Professor Huxley, "that the better a discourse is as an oration the worse it is as a lecture." Possibly some of our teachers may have erred in that direction, and failed from excess of oratory; but I much fear that many more fail in exciting any interest in their pupils. Some I remember to have heard whose lectures had the soporific charm of the divinity course of lectures spoken of by Southey in The Doctor, the recollection of which twenty years after it was delivered had the power, he declared, of putting him to sleep when every other known narcotic had failed, from "bang to black drop." After such a course one would hardly look for anything better than a "scanty harvest" and "misty perceptions of fundamental truth."

But it is objected to our system of medical education that the schedule in our schools is too meager, and Italy is cited as a country which furnishes us with an example worthy of our imitation. There, we are told, medical students hear lectures, among many other things, on geometry, botany, mineralogy, agriculture, and "the principles of design."

So many of our students out in the West and the South, having served a faithful apprenticeship in the corn-field before coming to our schools, I hope agriculture may be omitted in our curriculum. But why students should be required to study agriculture, or make themselves acquainted with "the principles of design," is more than I can understand; and why Italy should be held up to us at all as a model in medicine at this day seems to me a little strange. I would by no means do injustice to that country. She has a glorious history, and I trust a brilliant hereafter awaits her. We owe to her in modern times the splendid science of galvanism, which has already done so much to enlarge the boundaries of our knowledge, and promises to do much yet in therapeutics. But it will be admitted that Italian books on medicine are not translated into our language any longer, and that we hear very little nowadays of the medical journals of Italy.

But Germany is appealed to as the medical Utopia, where perfection in the system of medical education has been attained. Let me read you one of the schedules from that marvelous country after which it is proposed the medical schools of America shall model their course of instruction. It embraces the following: 1. Philosophy; 2. Logic and metaphysics; 3. Æsthetics; 4. Mathematics; 5. Encyclopedia and methodology of medical science; 6. Botany; 7. Anatomy; 8. Natural philosophy; 9. Chemistry; 10. Zoölogy; 11. Physiology and psychology; 12. Anthropology; 13. Mineralogy in its relations with geognosy; 14. General pathology and therapeutics; 15. Materia medica and dietetics; 16. Practical anatomy and practical physiology and pathology; 17. Special pathology and therapeutices; 18. Surgery; 19. Mental diseases; 20. Obstetrics; 21. Pathological anatomy; 22. Comparative anatomy; 23. Pharmacy and the art of prescribing;

24. Epidemiology and climatology; 25. State medicine; 26. And in the hospital, clinical medicine, clinical surgery, clinical ophthalmology, obstetrical clinics, clinics of skin diseases and of syphilis, and chemical physiology and pathology.

Germany at this day aspires to be the leading nation of the earth in thought, in philosophy, in philology, in science, as well as in arms. In perseverance, in industry, in love of science for its own sake, in deep learning, let us admit that no people on earth exceed them. Medicine is cultivated among them with unwearied zeal and assiduity. They have hospitals on the grandest scale; their laboratories are the most ample and best furnished; and all the appliances are to be found in their universities for imparting to students the most thorough knowledge of whatever science or profession they would pursue. Subjects for anatomical study cost a mere trifle. Autopsies by experts abound in the dead-rooms of their hospitals. Students are taught æsthetics, metaphysics, the methodology of medical science, logic, anthropology, geognosy, and the twenty other branches named in their curriculum.

And what, let me ask in a spirit of perfect candor, has it all amounted to? In histology, in pathological anatomy, in microscopy, in animal chemistry, their superiority is conceded. In surgery and in midwifery too we all admit their claims to the highest rank. But the practice of physic in Germany at this time, is it much more than *a meditation on death?* Have not *placebos* taken the place of remedies in their hospitals? Standing idly by while disease is running its course, curiously marking its natural history, looking on calmly while Death and Life-in-death, as described in the Ancient Mariner, are throwing the dice, and waiting to see whether nature will lose or win in the struggle, the physicians seem intent mainly on tracing its ravages in the cadaver, too well satisfied to find their diagnosis confirmed by the autopsy. Those vast stores of science treasured up by the German mind through the centuries, in what have they resulted? As to therapeutics, in something hardly better than nihilism; as to physiology, in a materialism which not only abolishes religion but renders any religious belief impossible. To this ghastly complexion it may be that American medicine must come at last, but I am sure no philanthropist can be impatient to see the day.

As one casts his eye over this appalling schedule from Germany, he is reminded of the lines in the old song:

> Could a man be secure
> That his days would endure,
> As of old, for a thousand long years,
> What things might he know!
> What deeds might he do!
> And all without hurry or care.

But if he could, are these the things which, after all, the people want their medical advisers to know? Reduced to the last analysis, what is it that they demand of us as instructors? To give them physicians learned in the languages, or physicians who can discharge the duties of their profession efficiently and well; men who can chop logic, or surgeons who can amputate limbs, or set them, or reduce them; scholars expert in metaphysics, or doctors skilled in the practice of physic? And are not the schools turning out such practitioners? In the main I believe they are, and of higher grade every year. But if I could agree to the German curriculum in all its amplitude, I should still object to the place assigned in it to clinical teaching. With his course on "æsthetics" my student should begin the study of medical and surgical diseases at the bedside. Clinical instruction, in the schedule I would draw up, should be the alpha and omega of the student, and whether he was studying geology or logic he should spend a part of every day examining the cases of sick men, women, and children. After making himself master of his art he might stray as far as he inclined into the tempting fields of literature and natural history, provided his patients raised no warning voice against it.

We are continually reminded in annual reports that while our schools teach too little there are quite too many of them. I think this is true; but what is to be done about it? Who will say how many schools we shall have, and where? Who has the power to silence one of them? Can we hope to bring our cold, wise maxims of experience so to bear upon the wing of young ambition as to repress it, or to quench the ardor of the youthful spirits who feel that they have a vocation to teach? Time is the only remedy I can see for this sore evil under the sun. Under the pressure of an enlightened public opinion, operating in part through this body for a long series of years, it must give way at last. The schools are obliged to gravitate in time to their places. Those that teach well will be sustained; the inferior will go under.

Twenty-two years ago, in a speech which I had the temerity to make before this Association at Cincinnati, I ventured to predict that no school without an ample supply of subjects and adequate means of clinical instruction could long sustain itself. Time is fully justifying my prediction. And to this test I am satisfied all the medical schools in the world must finally be brought. It is not by logic, or the principles of design, or Greek, or Latin, or French, or German that medical education is to be rendered what it ought to be; but by studying medicine in the laboratory, under the microscope, at the dissecting-table, in the wards of hospitals and in dispensaries where patients are seen, examined, and prescribed for, and where, by attending to what are now so often called the refinements of chemistry and physics, students learn the diagnosis of disease as well as its treatment. Here in the midst of these clinical demonstrations physic is to be learned, and not by going to universities. Where these are there will be the great medical centers: not necessarily at the great capitals; but none where these means of illustration are wanting.

We labor in vain when we get too far in advance of the people. If we write, it is in the hope of being read; and if we find no readers, our writings, however admirable, are to no purpose. Bring to our country the books produced by the ablest of German authors and how many would be read? Is

Rokitansky, or Vogel, or Chelius, or Rindfleisch, or Virchow? By a few, no doubt; but they are "*caviare* to the general." It is not in the direction of elaborate research that the medical mind of America has been running hitherto, or is yet running. In time it will no doubt take that direction; but treatises less elaborate, of less detail, more pointed and more practical, are what the profession demands just now.

Let me cite a case in illustration of the truth of this remark. Just twenty-two years ago a volume was given to the world by an old professor of the University of Louisville, one of my revered teachers, which all our reviewers agreed in pronouncing the most elaborate that had issued from the American medical press. The work was the labor of a life-time, having been projected forty years before in the author's youth. I refer to the great work of Dr. Daniel Drake. It was entitled "A Systematic Treatise, Historical, Etiological, and Practical, of the Principal Diseases of the Interior Valley of North America, as they appear in the Caucasian, African, Indian, and Esquimaux Varieties of its Population." Its wide scope is seen from the title.

To carry out his plan of making it an original treatise, and to render it as complete as possible, Dr. Drake visited all the principal seats of our malarious diseases, his travels of observation extending from Canada to the Gulf of Florida, and from New Orleans to the sides of the Alleghanies, where those diseases cease to prevail. He prepared hydrographic maps, illustrating the topography of the country; he collected one hundred tables, showing the mean temperature, winds, rain, and all that relates to the climate of the wide valley. All that he thought would interest the medical philosopher and practitioner he embodied in his book. "Here," we said, when at last his labors were concluded, "here is a work that will endure and be a treasure for all future writers and students of the diseases of America, Here is a work we are proud of, and which the profession will not willingly let die." My learned predecessor, Professor Stillé, in his report on American medical literature in 1850, said of it: "A superficial inspection of the work has convinced the committee that it belongs to the very highest rank of our medical literature, and may very probably come to be regarded as the most valuable original work yet published in America. It is certainly unrivaled in the amount and variety of its materials. Its distinguished author has raised a durable monument to his own name, and to the medical reputation not only of the great Valley, but of the greater Union."

And how stands the case with the great original work of my old master to-day? After all the years of reading, of research, of travel, of toil in constructing tables, in collecting observations, in sifting reports, what medical school in the country now refers to it as a text-book? It is to be seen in many libraries of the country, but in most of them it is left quietly to collect dust and cobwebs. Not a few physicians, I am afraid, regard it with no greater favor than a relative of mine, a very intelligent physician in Tennessee, who declared to me soon after it was published that "he would n't read it through for a hundred dollars." With the multitude, in truth, a big book continues still to be, what it was in the eyes of the old pagan—a great evil. Dr. Drake seems to have had a presentiment that his book would not be popular. "If," he said in his preface, "the work proves a failure as respects public favor, the author will not be without his reward, for he has found enjoyment in the labor of preparing it." He died before time had been given for testing its popularity. It will not be forgotten. It will live as a storehouse of facts, and be consulted for a long time by authors and teachers; but it was in advance of the generation for which it was written, and is not read by those for whose instruction the author expended so many years of labor.

Very similar, I apprehend, would be the appreciation by the people generally of graduates in medicine educated up to the standard of your model curriculum. In a few favored communities it is possible their stores of metaphysics and æsthetics, of geology and mineralogy, might be prized at their true value; but to the plain, common people these stores would seem little better than "loads of learned lumber." Nay, worse; for too many would conclude that a doctor who had dipped into so many arts and sciences could not have drunk deep of medicine.

When the World's Exposition was in progress at London it was affirmed by the critics that the only thing in which the Americans excelled all other people was "rugged utility." It is in the line of "rugged utility" that medicine with us has advanced with most eminent success. It is in this aspect that it is regarded with most favor by the people everywhere. But this is not the only line in which the progress of American medicine has begun to attract the attention of the world. It is developing in all directions, and producing authors of acknowledged merit as well as learned teachers and skillful surgeons and physicians.

No one who has been familiar with British medical journals for the last twenty-five years can have failed to note their altered tone in respect to the profession here. Something of this change, no doubt, is to be attributed to the power of time in allaying inveterate prejudices. These for a great while blinded our brethren across the sea to our real merits; but the true cause of their changed tone, let us not hesitate to assert, is to be found in the improved character of our profession. Referring to "the principles and practice of medicine" in our country, Sir Henry Holland, in his charming little volume of "Recollections," says they "are derived from schools of instruction and a medical literature in nowise inferior to our own."

Set down as much as you will of this commendation to the good-nature of the amiable author, still it is the well-considered opinion of one of England's most honored physicians; and whether his countrymen generally would agree with him in the estimate or not, no one of them all would deny that, as a profession, we are every year preferring claims to higher consideration. This indeed is a fact as clear to every observer as the growth of our population, or as our advancement in the mechanic arts and all the elements of national power. Nor is this any partial movement, but an advance all along the line. It has been well compared to those grand geological changes by which continents are slowly elevated above the level of the sea. The quickening impulse is one which has been felt by the profession to its remotest extremities. The medical schools have acknowledged it, and are generally improving their processes of instruction. In most of them the lecture-term has been extended, the number of professorships has been increased, and the teaching has been rendered more demonstrative. Harvard has inaugurated a part of the system so strongly urged upon the schools, and if it is found to work well it will be universally adopted. The graduates leaving the schools, though they may know less of Greek and mathematics, are far better trained than they were formerly in clinical medicine and surgery, and are better qualified to enter upon their duties as practitioners. Almost every town in every state boasts a surgeon who will attempt lithotomy, and at every cross-roads you will find a physician conversant with physical diagnosis, and who can put up a fractured limb or reduce a dislocation. These graduates are moreover, as a class, men who read and know how to keep pace with the march of medicine. One or more of our medical journals you will find on every physician's table; and so it happens that whatever is discovered or conjectured in Great Britain or on the Continent of Europe in the spring reaches him at his remote home by the beginning of summer.

While returning from California, a year ago, in company with a number of friends now present, the train stopped in the heart of the Rocky Mountains at a water-tank, about which had been built by laborers and miners a few frame shanties. A man in the garb of a miner entered the car, and asked if some physician on the train would not step over to his house and see a sick child? I went with him. The patient was a little boy suffering with some head trouble following measles. He was being calmed during the day by the bromide of potassium, and soothed to sleep at night by the hydrate of chloral. In the pine-board hut hard by, occupied as home and office by the doctor of the settlement, lay a medical journal of the current month, from the pages of which he gathered the latest utterances of the masters and the newest therapeutic discoveries of the day. There, in those mountain fastnesses, among that rude people a thousand miles removed from the haunts of civilization, where in his lonely rides he saw more antelopes than fellow-men, and heard oftener the shrill yelp of the coyote than the voice of a friend, this hardy pioneer in our art rendered to the sick boy of the miner the same succor that was given by his more fortunate brother to the greatest and richest denizens of the cities, to the very princes of the earth themselves.

There remains yet much to do in our educational system; nor, quoting a thought of Seneca, will the opportunity be wanting to those born after a thousand ages to add something to it. But I think it must strike you all as somewhat unaccountable that results so satisfactory as those just adverted to should flow from a system so essentially bad as ours is represented to be. Is it not something wonderful that these learned authors, these admired teachers, these safe, sagacious practitioners, should have come from schools so wanting in all the means of imparting a good medical education? That, in a word, sons so sturdy should descend from starveling parents? For we must not fail to remark that these men, of whom our country is proud, were, in very large proportion, educated at home. They are of domestic manufacture. The education of all but a few of them was commenced and completed in our own institutions.

Before sitting down I must allude briefly to another question which has occupied a portion of our time at previous meetings, and can not with propriety be ignored here: woman's right to enter the professions; to become a member of all learned bodies; to do all that she is fitted to do.

Woman is not, as was ungallantly held by Aristotle, an imperfect man, an ill-formed, imbecile being, but in development is as perfect in her sphere as man is in his. Men and women are indeed differentiated beings, one the complement of the other. Each has mental and physical peculiarities, and it is absurd to think of obliterating one class or the other by education or any possible system of training. Education will no more confer upon woman a man's physical attributes than it will give her his beard. The difference between the sexes, which is an organic one, begins to show itself in the infancy of our being. The little boy of eighteen months has tastes differing from those of his twin sister, and at this early age manifests himself an embryo man. The difference widens with the years, and attains its maximum at puberty. At a later day the divergence grows less and less, and on the down-hill of life the sexes become more assimilated again in all their moral qualities.

I shall not take up your time by a discussion of the question of the equality of the sexes. As to equality in physical strength, I believe it has never been claimed. The male in all nations, civilized and barbarous, is the larger and stronger. Anatomy as conclusively settles the question of intellectual equality. The brain of man is, on an average, larger than that of woman; and, other things being equal, size gives strength. We have Sir James Y. Simpson's authority for the statement that "there were lost in Great Britain, from 1837 to 1844, seven years, in consequence of the slightly larger size of the male than of the female head at birth, about fifty thousand lives, including those of about forty-six thousand infants, and of between three thousand and four thousand mothers who died in child-bed." So that this greater development of the male brain is attained before the child leaves its mother's womb.

But all male heads are not of greater size than the female, and it is far from being true that men are universally stronger in intellect than women. It is unjust to claim for the dominant sex universal superiority. The old school-master in Adam Bede declares "that there is only one thing women can do that men can not—bear children—and that they do in a poor, make-shift sort of way. Better it had been left to men." But in this the old school-master shows himself a sorry physiologist. Woman makes a better nurse than man—how much better all know who have experienced her gentle ministrations, but none so well as those who when sick have been thrown upon the hands of strangers. If the hospitals and infirmaries of the earth could return the sounds which have fallen upon their walls, with what myriad echoes would they testify to her angelic qualities at the bedside of the sick and the dying! And how natural the conclusion, if better nurses, why not at least as good physicians?

In all candor I must say I am unable to find a satisfactory reason why women might not succeed in some lines of our profession. Certain paths there are which, for the honor of the sex, I hope they would not aspire to tread. General Jackson once said of his friend, James Madison, that he "could not look with composure on fields of blood and carnage." I am sure the same might be affirmed with truth of the softer sex. I trust not many would incline to surgery. Very few indeed, I think, would have the nerve to cut for stone in the bladder, or perform ovariotomy. But in tact, in grace, in gentleness, even in learning, they might presume to rival us, and with these pleasing qualities would be welcome visitors to many a sick-chamber. If young and handsome, I have no doubt valetudinarians of our sex would look for their morning calls as they might for angel visits, only that they would not have them "short and far between."

The best proof that women may make learned doctors is the fact that in times past, if medical history is to be credited, they have given to the profession some members of true erudition. Women taught side by side with men in the first medical school established in the Christian era. Of the names associated with the School of Salernum, none appear more respectable for scientific zeal and attainments than those of the three female professors, Trotula, Rebecca, and Abella, who were ready to grapple the toughest subjects in physiology or medicine. Trotula wrote a dissertation with which many here are, I suppose, well acquainted, *de Mulieribus passionibus.* And so profound was her medical scholarship that when a great disputant, Rudolph Mala Corona, went to this seat of learning to try conclusions in science with its professors, she alone was deemed by him a worthy antagonist. Her sister professor, Abella, was a poet-physician, and indited a treatise, *de Atrabile, et de Natura Seminis Masculini,* in Latin verse.

The taste of the learned Rebecca inclined her to the same line of investigation, and the work which has come down to our times from her pen treats *de Urina et de Embryone.*

These mothers in medicine, however, were not prolific; they left no successors worthy of their fame, and their example has not had many imitators in the centuries since they flourished. I have strong doubts whether female physicians will ever become very numerous. Their own sex does not incline very much to them. The movement which is now startling the world by its din will probably end in no great results. But it depends on the public. What the people decree in this matter is a law to which all, we and the women alike, must bow submissively. If they want women doctors, such will be found ready to meet the demand. If those now pressing forward in their studies so eagerly find their services are not wanted, they will take down their signs, get married—if they can—or turn lecturers, or to some more lucrative employment. I hope they will never embarrass us by a personal application for seats in this Association. I could not vote for that.

This and many other disturbing questions that may arise will be handled by you, I doubt not, with judgment and candor. Nothing, I trust, will fall out during our meeting that can impair the influence now exercised by the Association over the minds of the medical men of our country. We owe it to our professional obligations jealously to guard its interests. It has grown to be a power in the profession, felt and recognized by all as salutary and elevating. Without any exercise of a legislative function, without the exaction of penalties, without any attempt to enforce its recommendations, it has gone quietly on, year after year, confirming its authority by wise suggestions alone. It has submitted a Code of Ethics to the profession which, accepted everywhere as law, favors order and fosters a spirit of harmony among its jarring members. Medicine is a humane and humanizing pursuit, and the Association cultivates all its ennobling tendencies. At the breaking out of our civil war its members were seen ranged on both sides of the line. Entering heartily into the contest like men, they stood shoulder to shoulder with their neighbors;

but during all the strife when a surgeon fell into the hands of the enemy he was treated by the surgeons, not as a prisoner of war, but as a brother. And when the fierce struggle was ended, and the crimson gulf that separated us was bridged over, the Association, with extended arms, invited back its sons from all the sections; and under its banner of peace they met once more as brethren. The Association is making our profession one in heart throughout our borders. May it be perpetual, and more and more a rallying point and a tower of strength for the profession over our whole wide continent.